Planta **Ka** Topi Jurnal Agrosains (Journal of Agro Science)

Vol. 9 No. 2 August 2021



Effectiveness of Clove Nano Biopesticides Against Mosaic Virus in Patchouli

RITA NOVERIZA, TRI LESTARI MARDININGSIH, JOHN NEFRI, SITI RIFFI'AH

The Potential of Biogas Slurry and Palm Oil Mill Effluent Slurry as Slow-Release Fertilizer Pellet Through Densification

RENI ASTUTI WIDYOWANTI. CANDRA GINTING. **RENGGA ARNALIS RENJANI**

Response of Corn-Soybean Intercropping to Fertilizer Packages in Dry Land with Dry Climate

AFANDI KRISTIONO, SITI MUZAIYANAH

Response of Growth and Yield of Soybean (Glycine max I. Merril) to the Method and Dose of Leachate Liquid Organic Fertilizer Application

HASNELLY, SYAFRIMEN YASIN, AGUSTIAN, **DARMAWAN**

The Occupancy of Barn Owl in The Artificial Nest Box to Control Rice Field Rats in Yogyakarta Indonesia

SUDARMAJI, ARLYNA BUDI PUSTIKA, KIKI YOLANDA, EVY PUJIASTUTI, TRI MARTINI, ALEXANDER STUART

Exploration of Arbuscular Mycorrhizal Fungi from Sugarcane Rhizosphere in Marginal Land

ZAHRAENI KUMALAWATI, SRI MULIANI, ASMAWATI, KAFRAWI, YUNUS MUSA





Planta Tropika Jurnal Agrosains (Journal of Agro Science)

Planta Tropika focuses related to various themes, topics and aspects including (but not limited) to the following topics Agro-Biotechnology, Plant Breeding, Agriculture Waste Management, Plant Protection, Soil Science, Post Harvest Science and Technology, Horticulture. Planta Tropika published two times a year (February and August) by Universitas Muhammadiyah Yogyakarta in collaboration with Indonesian Association of Agrotechnology / Agroecotechnology (PAGI). The subscriptions for one year: IDR 350.000.

Editor in Chief

DINA WAHYU TRISNAWATI Universitas Muhammadiyah Yogyakarta

Main Handling Editor

YOHANES ARIS PURWANTO Institut Pertanian Bogor

CHANDRA KURNIA SETIAWAN Universitas Muhammadiyah Yogyakarta

Editorial Board

EDHI MARTONO Universitas Gajah Mada

TOTOK AGUNG D.H Universitas Jendral Sudirman

DANNER SAGALA Universitas Prof. Dr. Hazairin SH. Bengkulu

RUSDI EVIZAL Universitas Lampung RADIX SUHARJO Universitas Lampung

IHSAN NURKOMAR Universitas Muhammadiyah Yogyakarta

RIZA ARIEF PUTRANTO Pusat Penelitian Bioteknologi dan Bioindustri Indonesia

SITI NUR AISYAH Universitas Muhammadiyah Yogyakarta

Editorial Manager

HERDA PRATIWI Universitas Muhammadiyah Yogyakarta

Editorial Address

DEPARTMENT OF AGROTECHNOLOGY
Faculty of Agriculture, Universitas Muhammadiyah Yogyakarta
Jl. Brawijaya, Tamantirto, Kasihan, Bantul
Telp (0274) 387646 psw 224
Email: plantatropika@umy.ac.id
Website: http://journal.umy.ac.id/index.php/pt

List of Contents

Vol. 9 No. 2 / August 2021





82 - 89 Effectiveness of Clove Nano Biopesticides Against Mosaic Virus in Patchouli Rita Noveriza*, Tri Lestari Mardiningsih, John Nefri, Siti Riffi'ah Indonesian Spices and Medicinal Crops Research Institute

90 - 99 The Potential of Biogas Slurry and Palm Oil Mill Effluent Slurry as Slow-Release Fertilizer Pellet Through Densification

Reni Astuti Widyowanti¹, Candra Ginting², Rengga Arnalis Renjani^{3*}

¹Department of Agricultural Technology, Faculty of Agricultural Technology, Stiper Agricultural University (INSTIPER)

²Department of Agricultural University (INSTIPER)
³Department of Agricultural Engineering, Faculty of Agricultural Technology, Stiper Agricultural University (INSTIPER)

100- 108 Response of Corn-Soybean Intercropping to Fertilizer Packages in Dry Land with Dry Climate

Afandi Kristiono, Siti Muzaiyanah*

Indonesian Legumes and Tuber Crops Research Institute

109 - 115 Response of Growth and Yield of Soybean (Glycine max l. Merril) to the Method and Dose of Leachate Liquid Organic Fertilizer Application

Hasnelly^{12*}, Syafrimen Yasin¹, Agustian¹, Darmawan¹

¹Faculty of Agriculture, Andalas University

²Study Program of Agrotechnology, Faculty of Agriculture, Muara Bungo University

116 - 125 The Occupancy of Barn Owl in The Artificial Nest Box to Control Rice Field Rats in Yogyakarta Indonesia

Sudarmaji¹, Arlyna Budi Pustika¹, Kiki Yolanda¹, Evy Pujiastuti¹, Tri Martini¹, Alexander Stuart²

¹Assessment Institutes for Agricultural Technology of Yogyakarta

²International Rice Research Institute

126 - 135 Exploration of Arbuscular Mycorrhizal Fungi from Sugarcane Rhizosphere in Marginal Land

Zahraeni Kumalawati^{1*}, Sri Muliani¹, Asmawati¹, Kafrawi¹, Yunus Musa²

¹Pangkep State Polytechnic of Agriculture

²Hasanuddin University

Editorial

Journal of Planta Tropika ISSN 0216-499X published by Study Program of Agrotechnology, Faculty of Agriculture, Universitas Muhammadiyah Yogyakarta, is journal presenting scientific articles of agricultural science (Journal of Agro Science). With full sense of gratitude to the Almighty Allah, Volume 9 Number 2 for the year of 2021 has been published.

In this edition, Journal of Planta Tropika presents seven research articles in the field of Agro sciences comprising post harvest physiology, crop cultivation system, weeds management, tissue culture, land management, and climate. The scientific articles discuss about:

(1) Effectiveness of Clove Nano Biopesticides Against Mosaic Virus in Patchouli, (2) The Potential of Biogas Slurry and Palm Oil Mill Effluent Slurry as Slow-Release Fertilizer Pellet Through Densification, (3) Response of Corn-Soybean Intercropping to Fertilizer Packages in Dry Land with Dry Climate, (4) Response of Growth and Yield of Soybean (*Glycine max* l. Merril) to the Method and Dose of Leachate Liquid Organic Fertilizer Application, (5) The Occupancy of Barn Owl in The Artificial Nest Box to Control Rice Field Rats in Yogyakarta Indonesia, and (6) Exploration of Arbuscular Mycorrhizal Fungi from Sugarcane Rhizosphere in Marginal Land.

The editors would like to thank the authors, reviewers, executive editors, leaders and LP3M UMY for their participation and cooperation. Our hope, this journal can be useful for readers or be a reference for other researchers and useful for the advancement of the agriculture.

Editors

GUIDE FOR AUTHORS

TYPE OF PAPERS

PLANTA TROPIKA receives manuscripts in the form of research papers in Bahasa Indonesia or English. The manuscript submitted is a research paper that has never been published in a journal or other publication.

SUBMISSION

The submission of the manuscript is done through our journal website http://journal.umy. ac.id/index.php/pt/index. If you need information regarding the process and procedure for sending the manuscript, you can send it via email at plantatropika@umy.ac.id. Editor's address: EMAIL: Please list one of authors' email address Program Studi Agroteknologi, Fakultas Pertanian, Universitas Muhammadiyah Yogyakarta, Il. Ring Road Selatan, Tamantirto, Kasihan, Bantul, Telp ABSTRAK: Abstrak is written in Bahasa Indone-(0274) 387646 psw 224, ISSN: 2528-7079.

ARTICLE STRUCTURE

The submitted manuscripts should consist of 15-20 pages of A4 size paper with 12-point Times New Roman fonts, 1.5 spacing with left-right margin and top-bottom of the paper is 2.5 cm each. ABSTRACT: Abstract is written in English All manuscript pages including images, tables and references should be page-numbered. Each table or picture should be numbered and titled.

The systematic of the manuscript writing is as follows:

and written bold. Only the first letter of the words is written in uppercase. Maximum length should be 14 words.

AUTHOR NAMES: The author names should be written in lowercase letters (only the first letter of the words is written in uppercase) and should be written from the first author and followed by the others along with the marker of each author's affiliation.

AUTHOR AFFILIATIONS: The author affiliation should be written in lowercase letters (only the first letter of the words is written in uppercase) and it is written according to the order of the number marker of each author's affiliation.

used for paper's correspondence.

sia using single space in a paragraph with maximum length of 200 words. It should contain background, objective, method, results, and conclusion followed by keywords containing maximum of 5 words.

using single space in a paragraph with maximum length of 200 words. It should contain background, objective, method, results, and conclusion followed by keywords containing maximum of 5 words.

TITLE: The title should be brief and informative INTRODUCTION: Introduction contains background, hypothesis or problem outline, and the objective of the research.

MATERIALS AND METHOD: Explaining in REFERENCE TO AN ARTICLE IN detail about materials and method used in the research as well as the data collection and analysis.

RESULT AND DISCUSSION: The results of the research should be clear. State the results collected according to analyzed data. Discussion should include the significance of the results.

CONCLUSION: Authors are expected to give brief conclusion and to answer the objective of the research.

ACKNOWLEDGEMENT: If necessary.

REFERENCES: Single space, according to the authors' guide of Planta Tropika.

EXAMPLES ON HOW TO WRITE REFERENCES

References are written in alphabetical order according to the rules below:

REFERENCE TO A BOOK

Gardner, F.P., R.B. Pearce, and R.L. Mitchell. 1991. Fisiologi Tanaman Budidaya (Translated by Herawati Susilo). UI Press. Jakarta.

REFERENCE TO A JOURNAL PUBLICATION

Parwata, I.G.M.A., D. Indradewa, P.Yudono dan B.Dj. Kertonegoro. 2010. Pengelompokan genotipe jarak pagar berdasarkan ketahanannya terhadap kekeringan pada fase pembibitan di lahan pasir pantai. J. Agron. Indonesia 38:156-162.

REFERENCE TO A THESIS/DISSERTATION

Churiah. 2006. Protein bioaktif dari bagian tanaman dan akar transgenic Cucurbitaceae serta aktivitas antiproliferasi galur sel kanker in vitro. Disertasi. Sekolah Pascasarjana. Institut Pertanian Bogor. Bogor.

PROCEEDING

Widaryanto dan Damanhuri. 1990. Pengaruh cara pengendalian gulma dan pemberian mulsa jerami terhadap pertumbuhan dan produksi bawang putih (Allium sativum L.). Prosiding Konferensi Nasional X HIGI hal. 376-384.

FIGURE FORMATTING

Title should be given below each figure. Additional information (notes) should be written in lowercase letters except the first letter in each sentence. All figures need to be numbered respectively. Figures should be placed close to explanation/ discussion about the figure.

Examples:

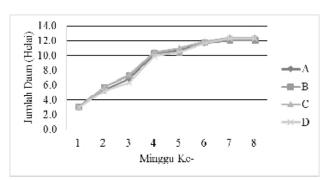


Figure 1. Number of leaves of corn plant

A = 250 kg KCl/ha + 0 kg KJP/haB = 125 kg KCl/ha + 273,89 kg KJP/ha

C = 62.5 kg KCl/ha + 410.84 kg KJP/ha

D = 0 kg KCl/ha + 547,79 kg KJP/ha

Fig. 1., Fig. 2., and so on. The title of the figure is written with lowercase letters (use uppercase letter at the beginning of the title only) and without full stop (.). Additional information (notes) is placed below the figure.

TABLE FORMATTING

The title of the table should be written above the table started from the left (left alignment). Additional information related to the table (notes) is placed below the table. The information is written in uppercase letters at the beginning only as well as the titles inside the table. Table is placed close to the discussion of the table.

Examples:

Table 1. Fruit compost analysis

Variable	Jatropha before composted	Jatropha after composted	SNI (National standard) for compost	Category
Water content	22,49 %	45,79 %	≤ 50 %	Qualified
рН	7,05	8,02	4-8	Qualified
C-Organic content	10,01	5,11	9,8-32 %	Not qualified
Organic matter	17,42 %	8,81 %	27-58	Not qualified
N-Total	0,97 %	2,69 %	< 6 %	Qualified
C/N Ratio	10,44	1.90	≤ 20	Qualified
Potassium	-	9,06 %	< 6 %**	Qualified

Notes: **) Certain materials originated from natural organic matters are allowed to contain P_2O_5 dan K_2O level > 6% (proved with the results of laboratory analysis).