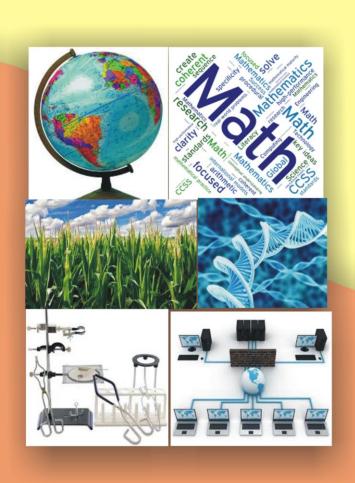


ADAMAWA STATE UNIVERSITY

JOURNAL OF SCIENTIFIC RESEARCH



Volume 11, Number 1, 2023 ISSN:2705-1900(Online);ISSN:2251-0702 (Print)



A PUBLICATION OF FACULTY OF SCIENCE, ADAMAWA STATE UNIVERSITY, MUBI



ADAMAWA STATE UNIVERSITY JOURNAL OF SCIENTIFIC RESEARCH (ADSUJSR)

VOLUME 11 ISSUE 1, 2023

ISSN: 2705-1900 (Online); ISSN:2251-0702 (Print)

A Publication of

FACULTY OF SCIENCE

ADAMAWA STATE UNIVERSITY (ADSU), MUBI

P.M.B 25 Mubi, Adamawa state Nigeria.

E-Mail: adsujsr@adsu.edu.ng

Website: adsujsr.adsu.edu.ng; www.adsu.edu.ng

Phone: +234 (0) 8036627553

EDITORIAL POLICY

Originality

Adamawa State University Journal of Scientific Research (ADSUJSR) is a journal for publication of original research articles, reviews, communications and letters from interested scholars and researchers in the academic community, international agencies, groups, individuals, institutions and other establishments concerning scientific approaches to sustainable development. Manuscript are critically reviewed and published twice a year. Articles not previously or simultaneously published in any other scientific or technical journal, written in English language but not limited to the following areas of research are considered for publication:

- ❖ Agricultural Sciences
- * Biological Sciences
- Computer Sciences
- Environmental Sciences
- Mathematical Sciences
- Medical Sciences
- Physical Sciences
- Science Education and Technology.

Philosophy

In any knowledge-based system, the currency of exchange is information "To gauge the research temper of African people".

Copyright©2011-2023 adsujsr.adsu.edu.ng

Submission of article for publication implies the transfer of the copyright from author(s) to the publisher upon acceptance. Accepted papers become the permanent property of the "Adamawa State University Journal of Scientific Research" and may not be reproduced by any means without the written consent of the Managing Editor or Chief Editor.

Disclaimer

The published articles contain the statements and opinions of the individual contributors and not those of ADSUJSR. The Journal Management disclaims all duty and responsibility for any harm or damage to people or property resulting from the use of any of the ideas, instructions, methods, or materials it provides in this publication. Any implicit assurances of merchantability or fitness for a particular purpose are specifically disclaimed by the Journal Management. When seeking expert guidance, it is advisable to use the services of a qualified specialist.

Owner

Faculty of Science, Adamawa State University (ADSU) Mubi.

EDITORIAL BOARD

Chief Editor

Prof. Solomon A. Mamuru, FCSN

Professor of Physical Chemistry

Department of Pure and Applied Chemistry Adamawa State University, Mubi, Nigeria.

Editorial Consultants

Prof. Ambrose. A. Zemba

Professor of Climatology & GIS/Remote Sensing Department of Geography

Modibbo Adama University, Yola, Nigeria.

Prof. Fabian Ezema

Professor of Solar and Material Science Department of Physics and Astronomy University of Nigeria, Nsukka, Nigeria

Prof. Esther Adelakun

Professor of `Organic Chemistry

Department of Pure and Industrial Chemistry

University of Jos, Nigeria.

Editorial Correspondent

Prof. Ezekiel Yonnana

Professor of Geography (Geomorphology and Water Resources Management)

(Chairman ADSUJSR/Holding Editor)

Department of Geography Adamawa State University, Mubi, Nigeria.

Mobile: +234 (0)8036627553

Prof. Abaje Lateef

Professor of Microbiology

Department of Pure and Applied Biology Ladoke Akintola University of Technology,

Prof. Israel Olayemi

Professor of Medical Entomology

Department of Zoology

Federal University of Technology, Minna, Nigeria.

Prof. Garba Shuaibu

Professor of Mathematics Education

Department of Science and Technology Education

Bayero University Kano, Nigeria.

Editors

Prof. Ismaila Y. Sudi

Professor of Environmental Biochemistry

Department of Biochemistry

Adamawa State University, Mubi, Nigeria

Prof. Clement Chub

Professor of Environmental Resources Management Department of Geography and Environmental Management University of Abuja, Nigeria.

Prof. Simon Kasidi

 ${\it Professor} \ {\rm of} \ {\rm Geophysics}$

Department of Geology

Adamawa State University, Mubi, Nigeria

Prof. Alfred I. Onen

Professor of Physical Chemistry Department of Chemical Sciences Federal University, Wukari, Nigeria.

Prof. Augustine U. Okoronka

Professor of Physics Education (Science Education)

Department of Science Education

Modibbo Adama University, Yola, Nigeria.

Prof. Peter M. Jonah

Professor of Plant Breeding and Genetics

Department of Crop Science

Adamawa State University, Mubi, Nigeria.

Prof. Augustine Clement

Professor of Animal Science (Monogastric Animal Nutrition)

Department of Animal Production

Adamawa State University, Mubi, Nigeria.

Prof. Peter Sunday Zirra

Professor of Computer Science and Internet Security

Department of Computer Science Federal University,

Kashere. Nigeria.

Prof. Dale W. Medugu

Professor of Renewable Energy and Electronics

Department of Pure and Applied Physics

Adamawa State University, Mubi, Nigeria

Prof. Yusuf Skwame

Professor of Numerical Analysis

Department of Mathematics

Adamawa State University, Mubi, Nigeria

GUIDE FOR AUTHORS

Originality

ADSU Journal of Scientific Research is a journal for publication of original research articles from interested scholars and researchers in the academic community, international agencies, groups, individuals, institutions and other establishments concerning scientific approaches to sustainable development. Manuscript are critically reviewed and published annually. Articles not previously or simultaneously published in any other scientific or technical journal, written in English or French language but not limited to the following areas of research are considered for publication.

- ❖ Agricultural Sciences
- Biological Sciences
- Computer Sciences
- Environmental Sciences
- Mathematical Sciences
- Medical Sciences
- Physical Sciences
- Science Education and Technology.

Copyright

Submission of article for publication implies the transfer of the copyright from author(s) to the publisher upon acceptance. Accepted papers become the permanent property of the "Adamawa State University Journal of Scientific Research" and may not be reproduced by any means without the written consent of the Managing Editor or Chief Editor.

Typescript

- ❖ The authors are responsible for preparing manuscript(s) clearly written in **scholarly acceptable** English language with no spelling, grammatical or punctuation errors.
- All manuscripts must be typewritten, font size 12, double spaced on A4 paper with margins on both sides, not exceeding twelve (12) pages, abstract and references inclusive. Receipts of paper will be acknowledged. Authors will be informed of the referees' report and rejected papers will be returned to the authors.
- The manuscripts are reviewed on the understanding that they are original and unpublished works of authors and are not considered for publication elsewhere.
- The Editorial board reserves the right to accept or reject manuscript(s) where it/they fail to meet the international standard/requirement and such decision is final.

Manuscript Categories

- (i). Original Research (maximum: 12 pages, 50 references)
- (ii). Short Communication/Letter (maximum: 8 pages, 25 references)
- (iii). Review (maximum: 40 pages, 90 references)

Manuscript Preparation

Title Section

The title section should contain the Title of the Article which should not be more than 20 words; Names of the author(s) and Contact address(es); mobile phone number(s) and e-mail address(es) of the corresponding author.

The title of the article should convey the topic of the research. Avoid words that add little to the meaningfulness of the article. E.g. "an empirical study of ...", "A field study of ..." etc, such words make the title too lengthy.

Abstract

The abstract should not exceed two hundred (200) words. Should be written in simple language, clear and concise and should contain the aim(s) of the study, methodology, main ideas of the discussion, research findings and conclusion. Abbreviations should be avoided and if used, should be explained at least once.

Keywords

A minimum of five (5) and maximum of six (6) keywords must be given at the end of the abstract.

Introduction

This should provide a general context for the work, explaining its significance and indicating why it should be of interest to scientist of other areas. Literature cited must be discussed to show the relationship between published work(s) and the research study.

Materials and methods

Previously described methods should be cited and not elaborated upon. Details should be referred to literature cited. New approaches or methodologies should receive detailed attention. Statistical methods of treatment should be mention if used.

Results and Discussion

Results and Discussions should be combined. The original and important findings should be stated. Results should be illustrated with figures or tables where necessary but these should be kept to the minimum. The discussion should be highlight what is new in the research.

Conclusion

It should summarize the major findings that could be drawn, pointing out their significance and alluding possible future directions.

Acknowledgements

These should be presented at the end of the text and before the references. Technical assistance, financial assistance and advice may be acknowledged.

References

References should follow the current APA format. All references must have in-text citations and all in-text citations must reflect in the references. The references must be typed separately and inserted at the end of each article.

Tables

Tables should be typed numbers consecutively with Arabic numerals (e.g. Table 1, Table 2 etc). They should be clearly shown and placed at the appropriate position(s) marked in the article.

Figures

Figures should be numbered consecutively with Arabic numerals (e.g. Fig. 1, Fig. 2 etc). Graphs should preferably be drawn using appropriate computer software and presented on single page ready to mount. These should be constructed in a manner that they understood without reading the text. All figures should be placed at the appropriate position(s) marked in the article.

Appropriate symbols should be used on graphs and explained in the legends. Graphs should not duplicate results presented in the tables. Photographs should be produced in black and white. Titles and comments of the figures and photographs should be provided on a separate page using MS word.

Units and Symbols

SI units should be used for physical quantities. Symbols, units and nomenclatures should conform to the recommendations of International Union of Pure and Applied Chemistry (IUPAC).

Manuscript Submission

Manuscripts should be submitted electronic copy alone (e-mail) to the above address for publication.

Publication Charges

Assessment fees: Six Thousand Naira (N6, 000.00) only

Publication fees: Fifteen Thousand Naira (№15, 000.00) only

These amounts cover only the electronic (PDF) as obtained from the website.

Payment should be made directly into our designated account and bank as detailed below:

Account Name: Adamawa State University Journal of Scientific Research (ADSUJSR)

Account Number: 1014611204

Bank: Zenith Bank Plc

Note: You can view your published manuscript at adsujsr.ads.edu.ng Ten (10) days after publication.

For online submission, address to adsujsr@adsu.edu.ng

For more information visit our website; adsujsr.adsu.edu.ng or www.adsu.edu.ng.

TABLE OF CONTENTS

Title page Editorial Policy Editorial Board Guide to Authors Table of Contents	Ii Iii Iv V Viii
	,
Assessment of Causes and Effects of Farmers-Herdsmen Clashes in Taraba State, Nigeria. Khalid Bello & Mohammed Y. Hamid	1 – 18
Avian mediated Seed Dispersal of Two Hemi-parasitic Mistletoe Species Agelanthus brunneus (Engl.) Balle & Hallé and Globimetula braunii (Engl.) Danser - Interaction between host-parasite pair and disperser abundance at Ngel Nyaki Forest Reserve. Aliyu Babale, Nsor Charles, A, Suwange Maurice, Joseph J. & Nya J.	19 – 27
Assessment of Municipal Waste Management in Gombe Metropolis for Sustainable Environment and Community Health.	
Doka Y , Nsor C. A., Joseph J, Nya J. Babale A. & Atukpa M. E.	28 - 40
Predictors and Management of Hazards in the Southwestern Nigerian Sawmilling Industrial Environment. Margaret Olusolape Jegede	41 – 47
A Survey of Green-Computing Attitude and Technology Deployment in Selected Southwestern Nigerian Universities.	
Margaret Olusolape Jegede & Isaac Oluwafemi Elesemoyo	48 - 54
Socio-Economic Determinants and Saving Patterns of Women Yam Producers in Benue State, Nigeria. K. Bello	55 – 62
Prevalence of Urinary Schistosomiasis among some School Children in Lokuwa, Mubi North Local Government Area of Adamawa State. Domo, G. A. & Zonovore, E. Y.	63 – 70
Hybrid Block Method for the Solution of Nonlinear Systems of First-Order Ordinary Differential Equations. Joshua A. Kwanamu	71 – 83
Prevalence of Gastrointestinal Parasites in Red-Billed Quelea (Quelea quelea) during Rainy Season in Gyawana Ecosystem, Adamawa State, Nigeria. Emmanuel H., Buba, Z. M., Joseph, J., and Elihu, A.	84 – 89
A Survey on Parasitic Cysts, Larvae and Ova on Some Fruits and Vegetables sold in Kashere Market. Domo, G. A. And Dalatu A. G.	90 – 97
Analysis of Maize Production Pattern Before and After the Boko – Haram Period in Madagali Local Government Area, Adamawa State, Nigeria. Hamid, M.Y.	98 – 108
Econometric Analysis of the Characteristics Cattle Purchased at Mubi – South (Tike) Market, Adamawa State. Hamid, M.Y.	109 – 116
Profitability Analysis of Cassava Production among Small-Scale Farmers in Mubi Area of Adamawa State, Nigeria. Joyce D. Moses & Titus Joshua	117 - 122
Effect of Tillage and Millet Residue Mulch Rates on Water Use Efficiency of Cowpea [Vigna	

unguiculata (L.) Walp] in Maiduguri, Nigeria. Ekle A. E., Ali E., Iorlaha V. A., Yisa, K. M., Kundet, A., Silas, Y. G., Kolo, P.N., & Ngala A. L.	123 – 130
The Role of School Feeding Programme on School Retention and Academic Achievement among Primary School Pupils in Adamawa State. Harrison Gideon Maghra, Iliyasu Audu, A. O. E. Egunsola, & M. L. Umoru.	131 – 139
Assessment of Heavy Metals Concentrations in Lake Gwakra, Girei Local Government, Adamawa State, Nigeria. Yohanna Peter, Ezekiel Yonnana, Ibrahim Saidu & Ibrahim B Bwatanlang.	140 – 147
Effect of Biology Practicals on Academic Achievement in Biology of Senior Secondary School Students in Mubi North Local Government Area, Adamawa State. Valada Alex & Tabitha Markus Vandima	148 - 153
Modelling the Effect of Public Campaign, Case Detection, Vaccine, Quarantine and Sanitarium on the Transmission of Tuberculosis Infections	
Njida James Andest, Ibrahim Isa Adamu, Samuel Musa, Joshua A. Kwanamu	154 - 178