

ISSN: 2158-2742

Vol. 4, No. 4, April 2013



Scientific
Research

American Journal of Plant Sciences



ISSN: 2158-2742



www.scirp.org/journal/ajps

Journal Editorial Board

ISSN: 2158-2742 (Print) ISSN: 2158-2750 (Online)

<http://www.scirp.org/journal/ajps>

Editor-in-Chief

Dr. Sukumar Saha

US Department of Agriculture, USA

Editorial Board

Prof. Ibrokhim Abdurakhmonov

Academy of Sciences of Uzbekistan, Uzbekistan

Dr. Ashok Ahuja

Indian Institute of Integrative Medicine, India

Prof. Mehmet Emin Aydin

Selcuk University, Turkey

Dr. Efrem Bechere

US Department of Agriculture, USA

Dr. Ramesh Buyyarapu

Dow AgroSciences, USA

Dr. Salah El-Sayed El-Hendawy

Suez Canal University, Egypt

Prof. Kunshan Gao

Xiamen University, China

Prof. Li-Zhi Gao

Chinese Academy of Sciences, China

Dr. Melaku A. Gedil

International Institute of Tropical Agriculture, Ethiopia

Dr. Samuli Helama

University of Lapland, Finland

Dr. Chandra Prakash Kala

Indian Institute of Forest Management, India

Dr. Mehmet Karaca

Akdeniz University, Turkey

Prof. Kyoung-Woong Kim

Gwangju Institute of Science and Technology, South Korea

Dr. Stanislav Kopriva

John Innes Institute, UK

Dr. Süleyman Korkut

Duzce University, Turkey

Dr. Vikas Kumar

Banaras Hindu University, India

Prof. Din-Pow Ma

Mississippi State University, USA

Prof. Amit Mitra

University of Nebraska, USA

Dr. Adele Maria Muscolo

University Mediterranea di Reggio Calabria, Italy

Dr. P. K. Nagar

Institute of Himalayan Bioresource Technology, India

Prof. Maria Papafotiou

Agricultural University of Athens, Greece

Prof. Antonios Philippoussis

National Agricultural Research Foundation, Greece

Dr. Oscar J. Rocha

Kent State University, USA

Dr. R. R. Sharma

Indian Agricultural Research Institute, India

Dr. Toshiyuki Shibata

Mie University, Japan

Dr. Rajbir Singh

Directorate of Water Management, India

Dr. Sylvia Urban

RMIT University, Australia

Dr. Kailas Wasewar

Visvesvaraya National Institute of Technology, India

Dr. John Z. Yu

US Department of Agriculture, USA

Prof. Tianzhen Zhang

Nanjing Agricultural University, China

Prof. Wenjun Zhang

Sun Yat-sen University, China

Prof. Zhiqiang Zhou

China Agricultural University, China

Dr. Munir Hussain Zia

US Department of Agriculture, USA

Guest Reviewers

Hamed K. Abbas

Patrick Covello

Sylvia Fernandez-Pavia

Hiroshi Fukumoto

Rosatto Hector Gustavo

Yaobo Hu

Mark Jackson

M. Krishnamurthi

Ogita Shinjiro

Robert D. Stipanivic

Juan Vazquez

Lingxiao Zhang

TABLE OF CONTENTS

Volume 4 Number 4

April 2013

Development and Characterization of Wheat Germplasm with Combined Resistance to Russian Wheat Aphid and Stem Rust (Race “Ug99”) in Kenya

F. O. Amulaka, J. N. Maling’a, M. Cakir, R. M. S. Mulwa.....767

Native Expanding *Merremia boissiana* Is Not More Allelopathic than Its Non-Expanding Congener *M. vitifolia* in the Expanded Range in Hainan

Q. Q. Huang, Y. D. Shen, X. X. Li, Z. W. Fan, M. G. Li, H. T. Cheng.....774

The Expressed Parasitism Genes in the Reniform Nematode (*Rotylenchulus reniformis*)

S. T. Nyaku, V. R. Sripathi, G. Wiley, F. Z. Najjar, L. J. Cseke, G. C. Sharma, B. A. Roe, S. B. Cseke, E. Moss, R. V. Kantety.....780

Stability of Brazilian Seasonally Dry Forests under Climate Change: Inferences for Long-Term Conservation

R. G. Collevatti, M. S. Lima-Ribeiro, J. A. F. Diniz-Filho, G. Oliveira, R. Dobrovolski, L. C. Terribile.....792

AtL1 a Non-LTR Retrotransposon Fragment in the Genome of *Arabidopsis thaliana* with Homology to Plants and Animals

G. Visioli, E. Maestri, E. Polverini, A. Pavesi, N. Marmioli.....806

Effect of Jasmonic Acid on Photosynthetic Pigments and Stress Markers in *Cajanus cajan* (L.) Millsp. Seedlings under Copper Stress

S. Poonam, H. Kaur, S. Geetika.....817

Assessing Reactions of Genetically Improved and Local Cassava Varieties to Cassava Mosaic Disease (CMD) Infection in a Savannah Region of the DR-Congo

M. Muengula-Manyi, L. Mukwa, K. K. Nkongolo, P. Tshilenge-Djim, S. Winter, C. Bragard, A. Kalonji-Mbuyi.....824

Response of Explants of Calli Rice (*Oryza sativa* L.) Japonica cv. “Ilmi” to Gene Transformation Using *Agrobacterium tumefaciens*-Mediated

F. A. Safitri, M. Ubaidillah, Miswar, K.-M. Kim.....838

Phenotypic and Molecular Characterization of *Phaseolus vulgaris* Plants from Non-Cryopreserved and Cryopreserved Seeds

I. Cejas, R. Méndez, A. Villalobos, F. Palau, C. Aragón, F. Engelmann, D. Carputo, R. Aversano, M. E. Martínez, J. C. Lorenzo.....844

Flash microbiocide: A Rapid and Economic Method for Determination of MBC and MFC

C. Hernandez, J. da Silva Coppede, B. W. Bertoni, S. de Castro França, A. M. S. Pereira.....850

Characteristics of Root Caps in Four Root Types of *Avicennia marina* (Forsk.) Vierh.

H. Purnobasuki.....853

Morphological and Anatomical Variations in Rheophytic Ecotype of Violet, *Viola mandshurica* var. *ikedaeana* (Violaceae)

R. Matsui, S. Takei, K. Ohga, H. Hayakawa, M. Yoshida, J. Yokoyama, K. Ito, R. Arakawa, T. Masumoto, T. Fukuda.....859

The Distribution and Problems of the Invasive Alien Plant, *Mimosa diplotricha* C. Wright ex Sauvalle (Mimosaceae) in Nigeria

F. Ekhaton, O. O. Uyi, C. E. Ikuenobe, C. O. Okeke.....866

QTL Mapping for Partial Resistance to Southern Corn Rust Using RILs of Tropical Sweet Corn

K. Wanlayaporn, J. Authrapun, A. Vanavichit, S. Tragoonrung.....878

Evaluation of New Formulation of Oxyfluorfen (23.5% EC) for Weed Control Efficacy and Bulb Yield in Onion

S. P. Ramalingam, C. Chinnagounder, M. Perumal, M. A. Palanisamy.....890

Growth of *Shorea contorta* Vid. Inoculated with Eucalypt Ectomycorrhizal Fungi in the Nursery and in a Logged-Over Dipterocarp Forest in Surigao, Philippines

N. S. Aggangan, M. A. T. Pollisco, J. B. Bruzon, J. S. Gilbero.....896

Esterases from the Seeds of an Edible Legume, *Phaseolus vulgaris* L.; Variability and Stability during Germination

S. A. Ali, G. Bendre, S. Ojha, V. Krishnamurthy, N. R. Swamy, K. S. Chandrashekharaiiah.....905

Storage Proteins and Trypsin Inhibitors of an Underutilized Legume, *Mucuna*: Variability and Their Stability during Germination

K. S. Chandrashekharaiiah.....910

Endophytic Mycobiota Characterization of the Amazonian Mistletoe *Cladocolea micrantha* Hosted in Cashew Tree

A. C. Guimarães, A. C. Siani, J. L. Bezerra, A. Q. L. de Souza, M. I. M. Sarquis.....917

Analysis of Sesquiterpene Distributions in the Leaves, Branches, and Trunks of Avocado (*Persea americana* Mill.)

J. Niogret, N. D. Epsky, E. Q. Schnell, R. J. Schnell, R. R. Heath, Alan W. Meerow, P. E. Kendra.....922

Review: Plant Binary Vectors of Ti Plasmid in *Agrobacterium tumefaciens* with a Broad Host-Range Replicon of pRK2, pRi, pSa or pVS1

N. Murai.....932

Occurrence and Distribution of Chickpea Diseases in Central and Southern Parts of India

R. Ghosh, M. Sharma, R. Telangre, S. Pande.....940

Resistant Evaluation of Kiwifruit Rootstocks to Root Zone Hypoxia Stress

Y. F. Mi, X. W. Ma, S. C. Chen.....945

The figure on the front cover is from the article published in American Journal of Plant Sciences, 2013, Vol. 4, No. 4, pp. 866-877 by Frank Ekhaton, *et al.*

American Journal of Plant Sciences (AJPS)

Journal Information

SUBSCRIPTIONS

The *American Journal of Plant Sciences* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright©2013 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: ajps@scirp.org



Call for Papers

American Journal of Plant Sciences

ISSN: 2158-2742 (Print) ISSN: 2158-2750 (Online)

<http://www.scirp.org/journal/ajps>

American Journal of Plant Sciences (AJPS) is a peer reviewed international journal dedicated to the latest advancement in related areas. The goal of this journal is to keep a record of the state-of-the-art research and to promote study, research and improvement within its various specialties.

Editor-in-Chief

Dr. Sukumar Saha

US Department of Agriculture, USA

Subject Coverage

This journal invites original research and review papers that address the following issues. Topics of interest include, but are not limited to:

- Agricultural Botany
- Agronomy
- Bryology
- Dendrochronology
- Economic Botany
- Ethnobotany
- Forestry
- Horticulture
- Integrated Pest Management and Integrated Resistant Management
- Lichenology
- Medicinal Plants
- Paleobotany
- Palynology
- Phycology
- Phylogenetics and Evolution
- Phytochemistry
- Phytopathology
- Plant Anatomy
- Plant Based Biofuels and Bioenergy
- Plant Biotechnology and Tissue Culture
- Plant Breeding
- Plant Cytogenetics and Cytology
- Plant Ecology
- Plant Genetic Resources and Databases
- Plant Genetics
- Plant Genomes, Bioinformatics and Genomics
- Plant Host-Pathogen Interactions
- Plant Molecular Biology and Evolution
- Plant Morphology
- Plant Nutrition
- Plant Physiology
- Plant Polyploidy
- Plant Protection
- Plant Proteomics and Metabolomics
- Plant Systematics
- Transgenic Crops and Their Products

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of **AJPS**.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

<http://www.scirp.org/journal/ajps>

E-mail: ajps@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science, by delivering superior scientific publications and scientific information solution provider that enable advancement in scientific research.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, world-wide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



Website: <http://www.scirp.org>
Subscription: sub@scirp.org
Advertisement: service@scirp.org