

ISSN: 2156-8553

Vol. 2, No. 3, August 2011



Scientific
Research

Agricultural Sciences



ISSN: 2156-8553



www.scirp.org/journal/as

Journal Editorial Board

ISSN Print: 2156-8553 ISSN Online: 2156-8561

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

Editor-in-Chief

Prof. De Wrachien Daniele State University of Milan, Italy

Executive Editor in Chief

Prof. M. B. Goli Mississippi Valley State University, USA

Editorial Board (According to Alphabet)

Dr. Said Elshahat Abdallah	Kafrelsheikh University, Egypt
Prof. Abdulrasoul Alomran	King Saud University, Saudi-arabia
Dr. Aziz	University of Reims, France
Dr. Nacer Bellaloui	Research Plant Physiologist, USDA-ARS, Stoneville, Mississippi, USA
Dr. Oğuz Dolgun	Adnan Menderes University, Turkey
Prof. Carlo Duso	University of Padua, Italy
Dr. Dionisios Gasparatos	Agriculture University of Athens, Greece
Engineer John William Gowing	Newcastle University, UK
Dr. Ghanshyam D. Heda	Mississippi University for Women, Columbus, MS 39701, USA
Prof. Robert Henry	University of Queensland, Australia
Prof. Hongqing Hu	Huazhong Agricultural University, China
Prof. Chung L. Huang	The University of Georgia, USA
Dr. Chao Liang	University of Wisconsin-Madison, USA
Prof. Manyuan Long	The University of Chicago, USA
Prof. Misopolinos Nikos	Aristotle University of Thessaloniki, Greece
Prof. Junhua Peng	Chinese Academy of Sciences, China
Dr. Elena Petrushkina	Russian Academy of Sciences, Russia
Dr. V. S. Saravanan	Centre for Development Research, Germany
Dr. Johannes Fritz Sauer	University of Manchester, UK
Dr. Allan T. Showler	Kika de la Garza Subtropical Agricultural Research Center, USA
Dr. Ashok Shrawat	Monsanto Company/Biotechnology, USA
Prof. Ram Singh	CCS Haryana Agricultural University, India
Dr. Yong Teng	Medical College of Georgia, USA
Prof. Wenjun Zhang	Sun Yat-sen University, China

Editorial Assistant

Joyce Yin Scientific Research Publishing, USA. Email: as@scirp.org

Guest Reviewers

Tewodros Assefa
Rahim Aydin
Gopal Krishan

Patricia Masikate
Debendra Nayak
David Nielsen

Dwiti Krishna Panigrahi
Thomas Pilkanov
Bali Ram

TABLE OF CONTENTS

Volume 2, Number 3, August 2011

Response of coleoptiles to water deficit: growth, turgor maintenance and osmotic adjustment in barley plants (*Hordeum vulgare* L.)

Á. González, L. Ayerbe.....159

Measuring and simulating maize (*Zea mays* L.) yield responses to reduced tillage and mulching under semi-arid conditions

W. Mupangwa, J. Dimes, S. Walker, S. Twomlow.....167

The making of an agricultural classic: farmers of forty centuries or permanent agriculture in China, Korea and Japan, 1911-2011

J. Paull.....175

Effect of split applications of urea on protein size distribution, physical dough properties, and baking performance of five experimental bread wheat lines

A. R. Islas-Rubio, K. Chávez-Quiroz, F. Vásquez-Lara, B. Silva-Espinoza, M. del C. Granados-Nevárez, H. Gonzalez-Ríos, M. Camacho-Casas... 181

Effects of autoclaving on the physiological action of paclobutrazol

D. M. Ribeiro, C. Müller, J. Bedin, G. B. Rocha, R. S. Barros.....191

The effect of nitrification inhibitor 3,4-dimethylpyrazole phosphate (DMPP) on nitrifying organism populations under *in vitro* conditions

D. Beltran-Rendon, K. Beltran-Rendon, L. Farfan-Caceres, H. Restrepo-Diaz, L. Hoyos-Carvajal.....198

QTL mapping for Chinese northern-style steamed bread specific volume

P. Wu, B. Liu, T. Zhou, Z. K. Li, H. Y. Du, J. T. Wang, J. C. Tian.....201

Effect of different fertilization on spring cabbage (*Brassica oleracea* L. var. *capitata*) production and fertilizer use efficiencies

Z. B. Guo, C. L. He, Y. H. Ma, H. B. Zhu, F. Liu, D. Z. Wang, L. Sun.....208

Effects of different levels of compost application on amounts and distribution of organic nitrogen forms in soil particle size fractions subjected mainly to double cropping

T. H. Nguyen, H. Shindo.....213

Cropping frequency and N fertilizer effects on soil water distribution from spring to fall in the semiarid Canadian prairies

R. de Jong, C. A. Campbell, R. P. Zentner, P. Basnyat, B. Grant, R. Desjardins.....220

Soil fertility effect on water productivity of maize in the upper blue Nile basin, Ethiopia

T. Erkossa, S. B. Awulachew, D. Aster.....	238
Virtual water: an effective mechanism for integrated water resources management	
A. El-Sadek.....	248
Effect of water stress at different periods on seed yield and water use efficiency of guar under Shambat conditions	
M. F. El M. Ahmed, D. M. Mac, A. A. G. Bashir.....	262
Effect of phenophase based irrigation schedules on growth, yield and quality of baby corn (<i>Zea mays</i> L.)	
H. K. Shivakumar, B. K. Ramachandrappa, H. V. Nanjappa, Mudalagiriappa.....	267
Water use efficiency and yield of winter wheat under different irrigation regimes in a semi-arid region	
M. H. Kharrou, S. Er-Raki, A. Chehbouni, B. Duchemin, V. Simonneaux, M. LePage, L. Ouzine, L. Jarlan.....	273
Pollination dynamics, grain weight and grain cell number within the inflorescence and spikelet in oat and wheat	
A. Rajala, P. Peltonen-Sainio.....	283
Mango malformation: II. mangiferin changes associated with <i>fusarium</i> pathogens	
W. M. Haggag, M. Hazza, M. E. A. El-Wahab.....	291
Integrated pest management of potatoes	
Y. Alptekin.....	297
Fungicide tolerance of <i>Trichoderma asperelloides</i> and <i>T. harzianum</i> strains	
A. P. Chaparro, L. H. Carvajal, S. Orduz.....	301
Uptake and distribution of ¹⁴C-labeled Fosthiazate in tomato (<i>Lycopersicon esculentum</i> L.)	
S. Mukherjee, S. Kumar, A. Srivastava, P. C. Srivastava.....	308
Influence of phosphorus on the performance of cowpea (<i>Vigna unguiculata</i> (L) Walp.) varieties in the Sudan savanna of Nigeria	
A. Singh, A. L. Baoule, H. G. Ahmed, A. U. Dikko, U. Aliyu, M. B. Sokoto, J. Alhassan, M. Musa, B. Haliru.....	313
Farmers' perceptions of pollinators' importance in coffee production in Uganda	
T. Munyuli.....	318
Effects of tillage, fallow and burning on selected properties and fertility status of Andosols in the Mounts Bambouto, West Cameroon	
P. Tematio, E. I. Tsafack, L. Kengni.....	334
Paddy field soil conservation: Indian historical practices	
D. Bhattacharya.....	341
Variation of soil and plant characteristics among old world bluestem species	

T. M. Zobeck, V. G. Allen, J. J. Cox, D. Philipp.....	347
Effects of level soil bunds and stone bunds on soil properties and its implications for crop production: the case of Bokole watershed, Dawuro zone, Southern Ethiopia	
K. Wolka, A. Moges, F. Yimer.....	357
Land application of spent gypsum from ditch filters: phosphorus source or sink?	
K. L. Grubb, J. M. McGrath, C. J. Penn, R. B. Bryant.....	364
Chemical properties during different development stages of fruit orchards in the mekong delta (Vietnam)	
P. van Quang, V. thi Guong.....	375

The figure on the front cover is from the article published in Agricultural Sciences, 2011, Vol. 2, No. 3, pp. 341-346 by Deepak Bhattacharya.

Agricultural Sciences

Journal Information

SUBSCRIPTIONS

The *Agricultural Sciences* (Online at Scientific Research Publishing, www.SciRP.org) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$39 per copy.

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©2011 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.

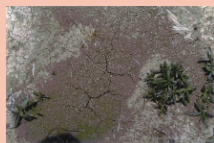
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any 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: as@scirp.org

Agricultural Sciences



www.scrip.org/journal/as

Call for Papers

Agricultural Sciences

ISSN Print: 2156-8553 ISSN Online: 2156-8561

<http://www.scrip.org/journal/as>

Agricultural Sciences (AS) is an international refereed journal dedicated to the latest agricultural science. The goal of this journal is to keep a record of the state-of-the-art research and promote the research work in these fast moving areas.

Editor-in-Chief

Prof. De Wrachien Daniele

Executive Editor in Chief

Prof. M. B. Goli

Editorial Board

Dr. Said Elshahat Abdallah

Prof. A. M. Alomran

Dr. Aziz Aziz

Dr. Nacer Bellaloui

Dr. Oğuz Dolgun

Prof. Carlo Duso

Dr. Dionisios Gasparatos

Engineer John William Gowing

Dr. Ghanshyam D. Heda

Prof. Robert Henry

Prof. Hongqing Hu

Prof. Chung L. Huang

Dr. Chao Liang

Prof. Manyuan Long

Prof. Misopolinos Nikos

Prof. Junhua Peng

Dr. Elena Petrushkina

Dr. V. S. Saravanan

Dr. Johannes Fritz Sauer

Dr. Allan Showler

Dr. Ashok Shrawat

Prof. Ram Singh

Dr. Yong Teng

Dr. Wenjun Zhang

Subject Coverage

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

- Agricultural Biodiversity
- Agricultural Botany
- Agricultural Ecology
- Agricultural Economics
- Agricultural Electrification and Automation
- Agricultural Entomology
- Agricultural Genomics
- Agricultural Production
- Agricultural Resources
- Agrochemistry
- Agrology
- Agronomy
- Animal Breeding and Nutrition
- Aquaculture
- Biological Engineering
- Breeding Genetics and Pathology
- Crop Physiology and Science
- Dairy Farming
- Energy Agriculture
- Environmental Hydrology
- Fertilization, Breeding and Protection of Plants
- Horticulture
- Husbandry Science
- Irrigation Management
- Modelling of Crop and Animal Systems
- Organic agriculture
- Plant Breeding Genetics and Pathology
- Plant Nutrition
- Plant Protection
- Security of Genetically Modified Agricultural Organisms
- Soil Science and Soil Land Use
- Soil-Plant Relationships
- Sustainable Rural Development
- Sustainable Rural Development Agricultural Botany
- Theoretical Production Ecology

We are also interested in: 1) Short Reports - 2 to 5 pages where the paper is intended to present either an original idea with theoretical treatment or preliminary data and results; 2) Book Reviews-Comments and critiques of recently published books in agricultural sciences.

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.scrip.org/journal/as>E-mail: as@scrip.org