

**PAKISTAN JOURNAL OF AGRICULTURE,
AGRICULTURAL ENGINEERING AND VETERINARY SCIENCES**

HEC Recognized "Y" Category, Official, International, Biannual, Peer Reviewed Journal of
Sindh Agriculture University, Tandojam. [www.sau.edu.pk/rjou.html]

Vol. 32, No. 1

Year 2016

LCCN 85-931448

ISSN 1023-1072



EDITORIAL BOARD

Chairman

Dr. M. D. Memon
Meritorious Professor

Editor-in-Chief

Prof. Dr. M. I. Keerio

Managing Editor

Prof. Dr. I. Rajpar

Asstt: Managing Editor

Mr. M. M. Jiskani

Subject Editors

Dr. T. Sultana, Professor, Entomology, sultana_tajwar@yahoo.com
Dr. Z. Mirani, Professor, Agri. Edu. Ext. and Short Courses, zamirani@sau.edu.pk
Dr. Zaheer Ahmed Nizamani, Associate Professor, Veterinary Pathology, zaheer5feb@yahoo.com
Dr. S. M. Bhatti, Assistant Professor, Soil Science, smbhatti@sau.edu.pk
Dr. A. A. Tagar, Associate Professor, Farm Power and Machinery, tagarahmed@hotmail.com

Editorial Committee

Overseas

Dr. Rattan Lal, Prof. School of Environment and Natural Resources, Ohio State, University.
Dr. Jose, L. Garcia-Pabon, Assistant Prof. Washington State University, USA.
Dr. Jim Dunwell, Prof. Plant Biotechnology, School of Biological Sci. University of Reading Whiteknights, UK
Dr. M. A. Memon, Washington State University, USA.
Dr. P. Hollington, University of Wales, Bangor, UK.
Dr. B. Kranz, Associate Prof. Haskell Agri. Laboratory, University of Nebraska, USA.
Dr. H. A. Osmanu, Associate Prof. Universiti Putra Malaysia, Sarawak, Malaysia.
Dr. Zheng Tian Qing, Assoc. Prof. Rice Molecular Breeding, Institute of Crop Sci. CAAS, China.
Dr. I. H. Kathio, Wilkes. Barre Animal Hospital 421 N. Pennsylvania, Avenue, USA.
Dr. Chris Anderson, Associate Prof. Massey University, New Zealand.

Inland

Dr. M. Abid Kharal, Prof. Faculty of Agri. Sci. & Tech. Bahauddin Zakariya University, Multan.
Dr. A. R. Mahar, Prof. Department of Botany, Shah Abdul Latif University, Khairpur (Mir's).
Dr. Asif Tanveer, Prof. Faculty of Agri. University of Agriculture, Faisalabad.
Dr. Asim Gulzar, Assistant Prof. Pir Mehr Ali Shah University of Arid Agriculture Rawalpindi.
Dr. S. D. Tunio, Prof. (Rtd.), Department of Agronomy, Sindh Agriculture University Tandojam
Dr. Haji Islamuddin Majeedano, Agriculture Research Institute, Tandojam.
Dr. Shah Alam Khan, Prof. Department of Crop Protection, The University of Agriculture Peshawar, KPK.
Dr. Muhammad Aslam Umrani, Director, Central Veterinary Diagnostic Laboratory, Tandojam.
Dr. T. A. Qureshi, Prof. (Rtd.), Department of Pharmacology, Sindh Agriculture, University, Tandojam.

ABSTRACTING AND INDEXING

Scientific Indexing Services (SIS), CAB Abstracts, AGRICOLA, FAO and PASTIC

MAILING ADDRESS

Managing Editor

Pakistan Journal of Agriculture, Agricultural Engineering and Veterinary Sciences
Sindh Agriculture University, Tandojam, Pakistan. irajpar@sau.edu.pk

Composed by: Zakir Hussain Kaleri, Office of the Managing Editor, SAU, Tandojam