

Journal of Horticultural Science & Technology

Volume 4, Issue 4 (December 2021)



ISSN 2664-9489 (Online)
ISSN 2617-3220 (Print)



An Official Quarterly Publication of

Pakistan Society for Horticultural Science

Also available at: <http://www.pshsciences.org/publications/JHST>

Editorial Board

Chief Editor

Dr. Muhammad Nafees, Professor/Chairman, Department of Horticultural Sciences, Faculty of Agriculture and Environment, The Islamia University of Bahawalpur, Pakistan (Email: muhammad.nafees@iub.edu.pk)

Managing Editors

Dr. Muhammad Azher Nawaz, Associate Professor, Department of Horticultural Sciences, Faculty of Agriculture and Environment, The Islamia University of Bahawalpur, Pakistan (Email: azher.nawaz@iub.edu.pk)

Dr. Raheel Anwar, Associate Professor, Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Punjab, Pakistan (Email: raheelanwar@uaf.edu.pk)

Associate Editors

1. Dr. Muhammad Amin, Associate Professor, Department of Horticultural Sciences, Faculty of Agriculture and Environment, The Islamia University of Bahawalpur, Pakistan.
2. Dr. Ishtiaq Ahmed, Assistant Professor, Department of Horticultural Sciences, Faculty of Agriculture and Environment, The Islamia University of Bahawalpur, Pakistan.
3. Dr. Muhammad Ahsan, Associate Professor, Department of Horticultural Sciences, Faculty of Agriculture and Environment, The Islamia University of Bahawalpur, Pakistan.
4. Dr. Riaz Ahmad, Lecturer, Department of Horticulture, The University of Agriculture, Dera Ismail Khan, Pakistan.
5. Dr. Muhammad Wasim Haider, Lecturer, Department of Horticultural Sciences, Faculty of Agriculture and Environment, The Islamia University of Bahawalpur, Pakistan.
6. Dr. Muhammad Ahsan Altaf, Scientific Researcher, Key Laboratory for Quality Regulation of Tropical Horticultural Crops of Hainan Province, School of Breeding and Multiplication, Hainan University, Sanya, China.
7. Dr. Sajjad Hussain, Associate Professor, Texas A&M University-Kingsville Citrus Center, Weslaco, USA.
8. Dr. Kashif Razzaq, Associate Professor, Department of Horticulture, MNS-University of Agriculture, Multan, Pakistan
9. Dr. Faisal Zulfiqar, Lecturer, Department of Horticultural Sciences, Faculty of Agriculture and Environment, The Islamia University of Bahawalpur, Pakistan.
10. Dr. Rana Mazhar Abbas, Associate Professor, Department of Agriculture and Agribusiness Management, University of Karachi, Karachi, Pakistan.
11. Dr. Muhammad Azam, Associate Professor, Institute of Horticultural Sciences, Faculty of Agriculture, University of Agriculture, Faisalabad, Pakistan.
12. Dr. Muhammad Awais Ghani, Associate Professor, Institute of Horticultural Sciences, Faculty of Agriculture, University of Agriculture, Faisalabad, Pakistan.
13. Dr. Muhammad Sohail Mazhar, Senior Director Plant Industries, Department of Industry Tourism and Trade of the Northern Territory Government of Australia. Adjunct Professor, Faculty of Science and Technology, Charles Darwin University, Australia.
14. Dr. Fareeha Shireen, Assistant Professor, Institute of Horticultural Sciences, Faculty of Agriculture, University of Agriculture, Faisalabad, Pakistan.
15. Dr. Faisal Hayat, Postdoctoral Researcher, United Arab Emirates University, UAE.
16. Dr. Hamza Sohail, Post-Doctoral Researcher, School of Horticulture and Landscape Architecture, Yangzhou University, Yangzhou, Jiangsu, China.
17. Dr. Muhammad Mohsin Kaleem, College of Horticulture and Forestry Sciences/Key Laboratory of Horticultural Plant Biology, Huazhong Agricultural University, Wuhan, China.
18. Dr. Maryam, Assistant Professor, Department of Botany, The Government Sadiq College Women University, Bahawalpur, Pakistan.
19. Dr. Muhammad Shafique, Associate Professor, Department of Horticulture, Faculty of Agricultural Sciences, Punjab University, Lahore, Pakistan.
20. Dr. Umer Habib, Assistant Professor, Department of Horticulture, PMAS-Arid Agriculture University, Rawalpindi, Pakistan.

Journal Editorial Office

Dr. Muhammad Nafees
Chief Editor JHST
Professor & Chairman
Department of Horticultural Sciences
Faculty of Agriculture and Environment
The Islamia University of Bahawalpur, Pakistan
Ph: +92 3006381974
Email: muhammad.nafees@iub.edu.pk

Journal Publisher

Pakistan Society for Horticultural Sciences
Institute of Horticultural Sciences
University of Agriculture, Faisalabad
Faisalabad, Punjab 38040, Pakistan
Ph: +92 41 9201193
Email: jhst@pshsciences.org

Table of Contents

1.	Effect of different vase life-enhancing solutions on vase life of cut sunflower <i>Muhammad Abdul Rehman Iqbal, Rashid Hussain, Muhammad Rashid Shaheen, Muhammad Nafees and Muhammad Bilal Javeed</i>	122
2.	An overview of drought stress in grapevine <i>Muhammad Abi Waqas, Amina Shahid, Fatima Rasool, Ahmar Bashir and Zarnain Raheem</i>	128