

# Journal of Horticultural Science & Technology

Volume 2, Issue 2 (June 2019)



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 Akbar Anjum**, Professor, Department of Horticulture, Bahauddin Zakariya University, Multan, Punjab, Pakistan (Email: akbaranjum@bzu.edu.pk)

## Managing Editor

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

---

## Subject Editors

- **Fruit Crops**  
**Dr. Muhammad Jafar Jaskani**, Professor, Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan (Email: jjaskani@uaf.edu.pk)
- **Vegetables, Aromatic and Medicinal Plants**  
**Dr. Muhammad Amjad**, Professor (Retd.), Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan (Email: ma\_aulakh@hotmail.com)
- **Floriculture and Landscape**  
**Dr. Iftikhar Ahmad**, Assistant Professor, Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Punjab, Pakistan (Email: iahmad@uaf.edu.pk)
- **Mushroom Production**  
**Dr. Muhammad Asif Ali**, Professor (Retd.), Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Punjab, Pakistan (Email: mushroomuaf@hotmail.com)
- **Postharvest Physiology & Supply Chain Management**  
**Dr. Aman Ullah Malik**, Professor/Director, Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan (Email: malikaman1@uaf.edu.pk)

---

## Editorial Committee

- **Dr. Nadeem Akhtar Abbasi**, Professor/Dean, Faculty of Crop and Food Sciences, PMAS-Arid Agriculture University, Rawalpindi, Pakistan (Email: nadeemabbasi65@yahoo.com)
- **Dr. Ishtiaq Ahmad Rajwana**, Professor/Pro-Vice Chancellor, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan (Email: ishtiaq.rajwana@mnsuam.edu.pk)
- **Dr. Javed Tareen**, Director General, Agriculture Research Institute, Seriab, Quetta, Balochistan, Pakistan (Email: jdt69@yahoo.com)
- **Dr. Abdur Rab**, Professor/Chairman, Department of Horticulture, The University of Agriculture, Peshawar, Peshawar, Khyber Pakhtunkhwa, Pakistan (Email: abdurraubaup@gmail.com)
- **Dr. Naveed Akhtar**, Director Horticulture, Agricultural Research Institute, Tarnab, Peshawar, Khyber Pakhtunkhwa, Pakistan (Email: hort.arit@kp.gov.pk)
- **Dr. Muhammad Saleem Jillani**, Professor/Chairman, Department of Horticulture, Gomal University, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan (Email: saleemjilani1965@yahoo.com)
- **Dr. Khalid Mahmood Qureshi**, Director, Horticultural Research Institute, National Agricultural Research Center, Islamabad, Pakistan (Email: hrinarc@gmail.com, kmq\_2008@hotmail.co.uk)
- **Mr. Javed Iqbal**, Director, Horticultural Research Institute, Ayub Agricultural Research Institute, Faisalabad, Punjab, Pakistan (Email: director\_hri@yahoo.com)
- **Mr. Muhammad Najeebullah**, Director, Vegetable Research Institute, Ayyub Agriculture Research Institute, Faisalabad, Punjab, Pakistan (Email: najeeb.aari@gmail.com)
- **Dr. Muhammad Tariq**, Director, Barani Agricultural Research Institute, Talagang, Chakwal, Pakistan (Email: barkichakwal@yahoo.com)
- **Dr. Saba Ambreen Memon**, Chairman, Department of Horticulture, Sindh Agriculture University, Tando Jam, Sindh, Pakistan (Email: sabamemonjee@gmail.com)
- **Mr. Shuaib Raza**, Assistant Professor/Deputy Registrar (G), Department of Horticulture, Ghazi University, Dera Ghazi Khan, Punjab, Pakistan (Email: sraza@gudgk.edu.pk)
- **Dr. Muhammad Saeed**, Assistant Horticulturist, Floriculture Research Station, Ayub Agricultural Research Institute, Faisalabad, Punjab, Pakistan (Email: msaeed142@gmail.com)
- **Dr. Muhammad Nafees**, Assistant Professor, University College of Agriculture & Environmental Sciences, The Islamia University of Bahawalpur, Punjab, Pakistan (Email: muhammad.nafees@iub.edu.pk)
- **Dr. Zahoor Hussain**, Assistant Professor/Incharge, Department of Horticulture, University College of Agriculture, University of Sargodha, Sargodha, Punjab, Pakistan (Email: zahoor.hussain@uos.edu.pk)
- **Dr. Mehdi Maqbool**, Assistant Professor, Department of Horticulture, The University of Poonch Rawalakot, Azad Jammu and Kashmir, Pakistan (Email: mehdimaqbool@yahoo.com)

---

## Journal Editorial Office

Prof. Dr. Muhammad Akbar Anjum  
*Chief Editor JHST*  
Department of Horticulture  
Bahauddin Zakariya University  
Multan 60800, Punjab, Pakistan  
Ph: +92 61 9210386  
Email: akbaranjum@bzu.edu.pk

---

## Journal Publisher

Pakistan Society for Horticultural Sciences  
Institute of Horticultural Sciences  
University of Agriculture, Faisalabad  
Faisalabad, Punjab 38040, Pakistan  
Ph: +92-41-9201086  
Email: jhst@pshsciences.org

## Table of Contents

1.	<b>Licorice a supernatural herb for healthy life: bioactive phytochemicals and biological activities – A review</b>	34
	<i>Rozina Aslam, Misbah Aslam, Shawana Abdullah and Muhammad Sarwar Yaqub</i>	
2.	<b>Effect of PGRs on vegetative and reproductive traits of bitter gourd (<i>Momordica charantia</i> L.): A field assessment</b>	41
	<i>Tanveer Ahmad, Syed Muhammad Zia-ul-Hassan, Qumer Iqbal, Muhammad Awais Ghani and Rana Muhammad Sabir Tariq</i>	
3.	<b>Effectiveness of fruit bagging for the control of insect-pests complex and its impact on quality of mango fruits</b>	45
	<i>Haider Karar, Maqbool Ahmad, Hameed Ullah, Muhammad Wajid, Muhammad Zubair and Hamid Raza</i>	
4.	<b>Effect of boric acid, potassium nitrate and magnesium sulphate on managing fruit cracking and improving fruit yield and quality of pomegranate</b>	49
	<i>Muhammad Azhar Bashir, Ammara Noreen, Muhammad Ikhlaz, Kashif Shabir, Faheem Altaf and Naheed Akhtar</i>	
5.	<b>Performance of two onion (<i>Allium cepa</i> L.) cultivars under two different planting systems in calcareous soil</b>	54
	<i>Muhammad Akbar Anjum, Hafiza Muniba Din Muhammad, Rashad Mukhtar Balal and Riaz Ahmad</i>	
	<b>Guide to Authors</b>	60

### Cover Images

---

Bagged fruit on mango tree – Karar et al. / J. Hortic. Sci. Technol. 2(2): 45-48 (2019)

Pomegranate fruit – Bashir et al. / J. Hortic. Sci. Technol. 2(2): 49-53 (2019)

Onion crop – Anjum et al. / J. Hortic. Sci. Technol. 2(2): 54-59 (2019)