

# Proceedings of Pakistan Society for Horticultural Science

2<sup>nd</sup> INTERNATIONAL  
CONFERENCE ON

**Horticultural Sciences**



**Theme:**  
Production Challenges & Food Security

**2016**  
February 18-20

Editors:

*Muhammad Jafar Jaskani, PhD*

*Raheel Anwar, PhD*

*Iftikhar Ahmad, PhD*

*Muhammad Azam, PhD*



**INSTITUTE OF HORTICULTURAL SCIENCES  
UNIVERSITY OF AGRICULTURE, FAISALABAD, PAKISTAN**



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*Theme*

Production Challenges & Food Security



*Organized by*

**Institute of Horticultural Sciences  
University of Agriculture Faisalabad, Pakistan**

**Proceedings of Pakistan Society for Horticultural Science**

2<sup>nd</sup> International Conference on Horticultural Sciences, February 18-20, 2016

Theme: Production Challenges and Food Security

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## Preface

The “2<sup>nd</sup> International Conference on Horticultural Sciences” was held at Institute of Horticulture Sciences University of Agriculture Faisalabad on February 18-20, 2016. The theme for the conference was “Production Challenges and Food Security”.

In agriculture enterprises, horticulture offers the best alternative for increasing food self-dependency, improve diet and ensure the generation of higher earnings and employments. Global horticulture industry has seen unprecedented growth during the past three decades. Adaption of the scientific knowledge in improving production technologies, supply chain systems and postharvest management has greatly enhanced produce quantity and quality. But, there is still need to find answers to several other important issues. Biotic and abiotic stresses hamper food yield. Similarly, economic production of healthier foods, efficient energy and water use, reduction in postharvest losses and food security are few of the major challenges to world horticultural industry. Meeting these challenges in developing countries is even harder due to lack of resources, infrastructure and awareness in local growers. Pakistan is bestowed with diverse climatic and soil conditions, which are suitable for the cultivation of many fruits, vegetables, ornamentals and medicinal plants. However, like other developing countries, Pakistan is also facing challenges in production and postharvest management of fruits, vegetables, ornamentals and medicinal crops.

Since, scientific community is striving hard to find solutions to these and other such issues, it was deemed desired to provide a platform to the researchers, scientists, growers, processors, exporters and other stakeholders to share their novel ideas for food safety and security issues in horticulture production and postharvest management. Subject experts from all corners of the world presented their ideas and research findings in technical sessions on nursery management, biodiversity and conservation, breeding and biotechnology, organic and protected horticulture, production and management, plant nutrient and water management, plant protection, stress management, mushroom technology, postharvest management, processing and value addition, extension and commercialization and marketing and economics. Every presentation was followed by a comprehensive discussion session. Thus, the conference provided an excellent opportunity to discuss issues related to production and food security and benefit from the experience and knowledge of subject experts. Potential problems and their possible solutions were highlighted and resources were identified to disseminate the documented information and enhance the scope and service of the conference proceedings. So, the publication of the conference proceedings would be of great significance of stakeholder of horticulture industry and would be a useful addition to the existing knowledge on horticultural sciences. Finally, I would like to congratulate the organizers of the conference, the editors and the publisher of the proceedings for a job very well accomplished.

Even though, proceeding papers are peer reviewed and repeated editing have been done to rectify possible errors, but if errors still exist, those may please be ignored. I shall welcome any suggestion from the readers which may help to improve upcoming events of similar importance.

**Prof. Dr. Muhammad Amjad**  
*Convener Organizing Committee*

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On behalf of the conference organizers, I am thankful to Prof. Dr. Iqrar Ahmad Khan (*Sitara-e-Imtiaz, Ordre des Palmes Académiques*), Vice Chancellor, University of Agriculture, Faisalabad for administrative and technical support. I owe a great deal to Prof. Dr. Muhammad Arshad (*Tamgha-e-Imtiaz*), Dean, Faculty of Agriculture, University of Agriculture, Faisalabad for extending his full support and allowing facilities to hold the conference. Without his help, it would not have been possible to hold the event of great significance with its successful culmination.

I offer my sincere gratitude to Higher Education Commission of Pakistan (HEC), Endowment Fund Secretariat, University of Agriculture, Faisalabad, Pakistan Society for Horticultural Science (PSHS) and Australian Aid (Aus AID) for their financial support to organize the conference.

I truly appreciate the services of an active team of Pakistan Society for Horticultural Science (PSHS) who had been very instrumental in the organizing and consolidating conference activities. Last but not the least, I am thankful to the faculty and staff of Institute of Horticultural Sciences, University of Agriculture, Faisalabad and members of conference committees for their untiring work to make this event timely possible. Many students also deserve conducive appreciation for their timely help to make the event successful.

I am hopeful that Institute of Horticultural Sciences will hold other such events on core issues of global horticultural industry and play its role as one of the leading institutes of the country.

**Prof. Dr. Muhammad Jafar Jaskani**  
*Convener Scientific Program Committee*

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