



PROCEEDINGS OF THE FIRST INTERNATIONAL HORTICULTURE CONFERENCE



**Theme: Six Decades of Horticulture Development in Nepal:
A Retrospect and Way Forward to Prosperity**

Date: 8th - 11th April 2016

Venue: Park Village Resort, Kathmandu





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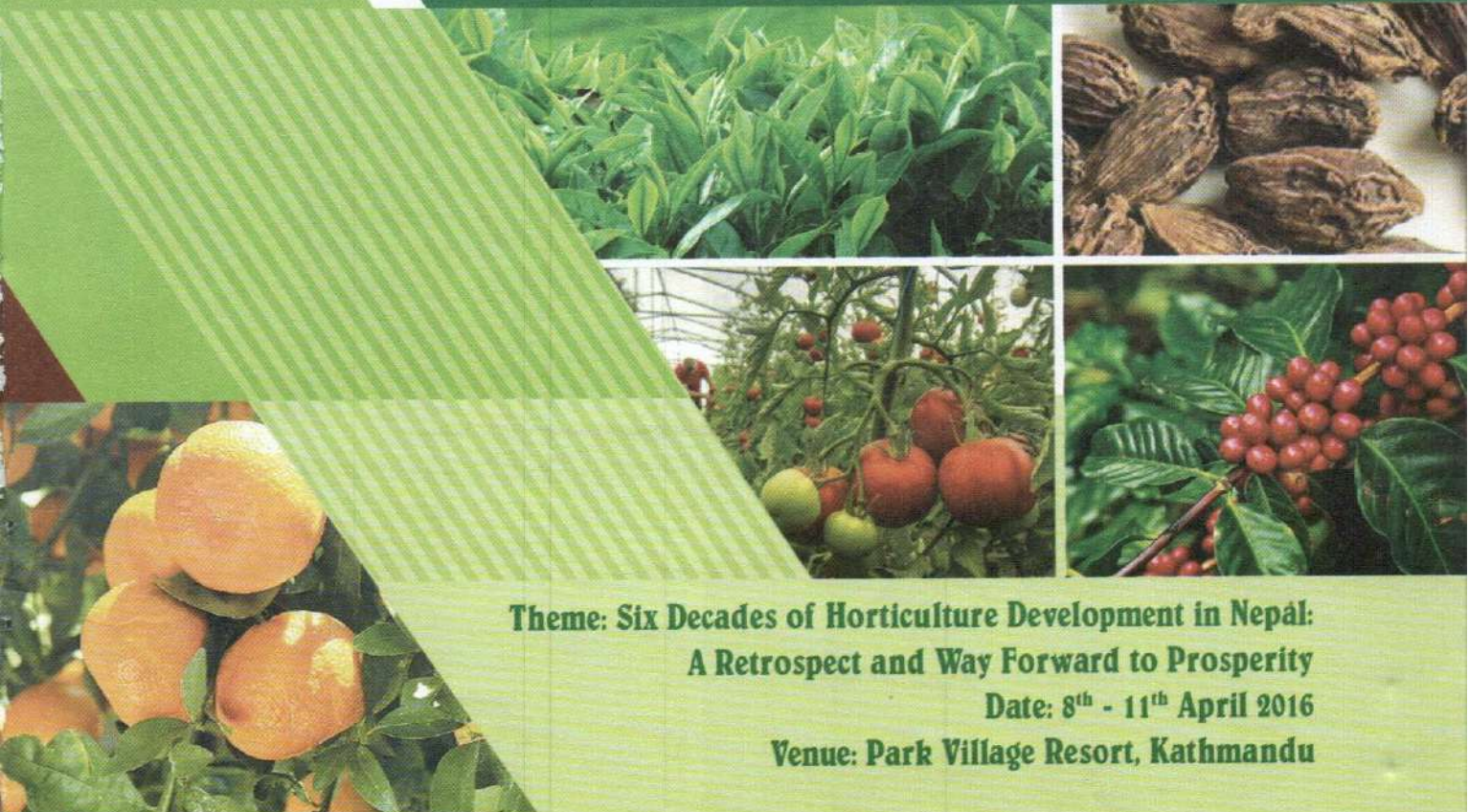
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Nepal Horticulture Society

Editorial Note



Nepal Horticulture Society (NHS) was established in 1990. On the auspicious occasion of its silver jubilee year NHS organized First International Horticulture Conference in collaboration with Ministry of Agriculture, government of Nepal and Faculty of Agriculture, Agriculture and Forestry University from 8-11 April, 2016 at Park Village Hotel, Budhanilkantha, Kathmandu. The theme of the conference was "Six decades of Horticulture Development in Nepal: A retrospect and way forward to prosperity". The objective of the conference was to create a scientific forum for sharing knowledge, experience and innovations in the field of horticulture from national and international level.

Plenary and parallel sessions were conducted on various research and development themes namely (1) Thematic Session (2) Technical Session – oral and poster presentation and (3) Strategic Session. Among the papers presented in thematic session the keynote presentation by Prof. Rod Drew, President of International Society for Horticultural Science (ISHS) on Importance of Horticulture was very informative to understand horticulture as a global issue in the context of changing environment and food habit of the people. Five SAARC countries – Bangladesh, Bhutan, India, Nepal and Sri Lanka presented paper on status of horticulture development of respective country in the thematic session. These status papers are included in the proceedings and hope to be highly informative to understand regional issues of horticultural sector. Endeavors and achievements made on horticulture research and development of Nepal by various government, academic, I/NGO and private sector was also presented in the thematic session. In technical session, more than 20 scientific papers from Nepal and abroad on recent research and technological advancement of fruit, vegetable, spices and ornamental horticulture were presented. The last session was mainly devoted to develop future strategy of horticulture development of Nepal in the context of changed political system. The present volume of the proceedings includes the above mentioned papers presented in the conference as well road map for future horticulture development.

The authenticity of the papers and the opinion expressed herein are of respective author(s). The editorial board has simply made uniformity in format, correction of typological errors and rearrangement of sentences in some cases. I hope the information and findings presented in the proceedings bear a productive impact on horticulture research and development of Nepal as well as SAARC countries. The proceedings Editorial Committee with gratitude acknowledge the valuable support provided by national and international authors, government organization, private entrepreneurs, NHS Executive Committee/members and other individuals for their support with their authorship. Special thanks are due to members of Editorial Board for their valuable contribution in compiling and editing papers to bring the proceedings in this form. The institutions supporting proceeding publication are also highly acknowledged. On behalf of Editorial Committee, I look forward for your continued support.

Krishna Prasad Paudyal, PhD
Editor-in Chief

The Prime Minister's Message

To The President

Nepal Horticulture Society

Dear Mr. Mohan Bahadur Thapa

I am pleased to know that Nepal Horticulture Society is publishing the proceedings of the first international horticulture conference. This conference was held to commemorate society's twenty five years of service to the nation. Congratulations on your dedicated service to the people of the country.

Horticulture is an important sub sector of agriculture in Nepal. This sub sector can play a significant role in combating mal-nutrition, conserving fragile ecological balance, maintaining food security and above all creating jobs for the people.

Horticultural crops are important export commodities of Nepal. The society should support the government in formulating strategies and road maps so that production and productivity of such crops increase. This sub sector could play an important role in balancing international trade.

I wish you all well.

Best wishes

KP Sharma Oli

The President/Convener's Message

The First International Horticulture Conference was jointly organized by Nepal Horticulture Society, Ministry of Agricultural Development and Agriculture and Forestry University on 08 to 11 April, 2016 in Kathmandu, Nepal. The theme of the conference was "Six Decades of Horticulture Development in Nepal: A Retrospect and Way Forward to Prosperity". The conference was held for four days consisting of inaugural session, technical session, closing session and AGM to elect new executive committee.



I express my gratitude to Honorable Mr. K. P. Sharma Oli, Chief Guest and Prime Minister of Nepal for inauguration and for giving very encouraging remarks regarding the First International Horticulture Conference and whole horticulture development in Nepal. I also extend sincere thanks to Prof. Mana Raj Kolakchhapati, Registrar of AFU and Mr. Yogendra Kumar karki, Joint Secretary, Ministry of Agricultural Development for their valuable remarks in the inaugural session.

I highly appreciate the financial support of FAO, UNDP/MEDEP, iDE, HICAST, NARC, Li-BIRD, HVAP, AFSP, AGRO MANANG, RISMFP, HELVETAS etc. and private sectors for their financial contribution to organize the conference and to publish the Proceedings. I must remember the joint effort of NHS, MOAD and AFU to make the conference a successful event.

I, also being the convener of this Conference Organizing Committee, would like to express my sincere appreciation and thanks to chairmen and members of Program Committee, Finance Committee, Resource Mobilization Committee, Publication Committee, Publicity Committee and Event Management Committee for their help and support to organize and conclude the conference successfully. Special thanks are also extended to all paper contributors of Nepal and all other foreign countries, chief editor and editors for their hard labour to make the proceedings in this shape, guests and participants for their participation.

Lastly, I hope the proceedings will be very useful to horticulture researchers, planners, development workers, students and many others who are involved in this sector.

All the Best.

Thank you!

Mohan Bahadur Thapa

Summary

8th April 2016

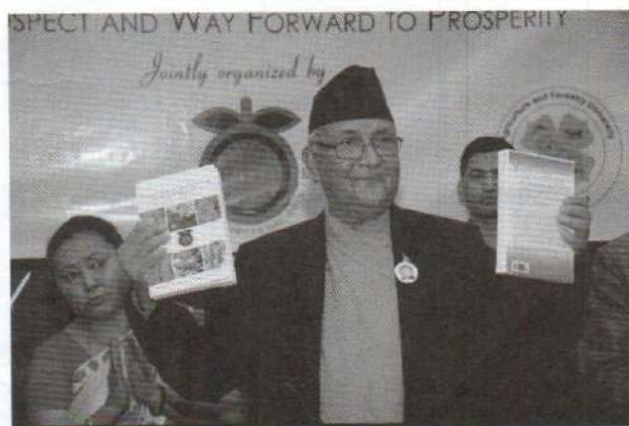
The First International Horticulture Conference commenced on 8th April 2016. The chief guest, Rt Hon. Prime Minister K.P. Sharma Oli inaugurated the conference. The chairperson of this ceremony was Mr. Mohan Bahadur Thapa, President of Nepal Horticulture Society. Among the special guests were Dr. Mana Raj Kollachapati, Registrar of Agriculture and Forestry University, Mr. Yogendra Kumar Karki, Joint Secretary of Ministry of Agriculture Development and Mr. Keshav Badal, Member of Parliament. After inaugurating the conference, the chief guest took part in the book release of "Six Decades of Horticulture Development in Nepal". The chief guest also presented memento to past presidents of Nepal Horticulture Society, and addressed all conference attendees on the status and importance of horticulture in Nepal. The inauguration ceremony witnessed about 220 participants including delegates from SAARC countries, and was followed by a cocktail dinner.



Chief Guest Rt Hon. Prime Minister inaugurating the conference by lighting the panas



Top row (from left to right) : Mr. Bhairab Raj Kaini, Ms. Kinlay Tshering, Dr. Kapila Yakandawala, Dr. K.L. Chadha, Dr. Md. Abdus Siddique and Mr. Shiva Bahadur Nepali Pradhan
Bottom row (from left to right): Mr. Keshav Badal, Mr. Yogendra Kumar Karki, Rt. Hon. Prime Minister K.P. Sharma Oli, Mr. Mohan Bahadur Thapa and Dr. Mana Raj Kollachapati



"Six Decades of Horticulture Development in Nepal" Book release



Chief Guest addressing the participants



Chief Guest presenting memento to past president
Mr. Shiva Bahadur Nepali Pradhan



Participants on the inauguration ceremony of the conference

9th April 2016

On 9th April 2016, the second day of the conference started with the presentation of thematic papers. The presenters illustrated several topics on the development of fruits, vegetables, horticulture research and horticulture education. This was followed by presentations from the private sector which showed the current situation of the fruit, vegetable and flower industries, as well as a private perspective on agriculture education.

On the same day, delegates of SAARC countries presented the status of horticulture in their respective countries. Among the presenters were Dr. Md. Abdus Siddique of Bangladesh, Dr. Kapila Yakandawala of Sri Lanka, Ms. Kinlay Tshering of Bhutan, Dr. Krishan Lal Chadha of India and Mr. Mohan Bahadur Thapa of Nepal. Later, the delegates along with the executive committee of Nepal Horticulture Society assembled at The Standard Nursery and discussed the need for a South Asian Regional Horticulture Society. An Ad Hoc Committee was then formulated, under the chairmanship of Dr. K. L. Chadha.



Dr. Kapila Yakandawala from Sri Lanka presenting his
country paper

The second day of the conference ended with presentations made by several INGOs. Representatives of FAO, MEDEP, JICA, IDE and HELVETAS briefly explained about their contributions in horticulture development of Nepal. Due to time pressure, the presentations of NGOs were postponed until the next day.

There were about 175 participants on the second day.



Ms. Kinlay Tshering from Bhutan presenting her country paper



SAARC country representatives discussing the need of a South Asian Regional Horticulture Society.



Ad Hoc Committee Members of the South Asian Regional Horticulture Society.

10th April 2016

On 10th April 2016, the third day of the conference started with the presentations of several NGOs which were scheduled to be on the previous day. Representatives of CEAPRED, FORWARD, RRN and ECARDS highlighted their contributions in horticulture development of Nepal.

This was immediately followed by a technical session which was divided into two parallel sessions. There were 24 presenters in total and they presented technical papers in their respective fields. Four of the presentations were made online via skype as the presenters were outside the country. A few technical posters were also being presented simultaneously.

The third day ended with a workshop on preparing a way forward document that would serve as a firm guideline document for development of horticulture in the future. Participants were divided into four thematic groups namely horticulture research, extensions, education and business. The groups were assigned to prepare and present a road map for horticulture development in the future.

There were about 175 participants on the third day.



Representative from RRN presenting their contribution in horticulture development of Nepal

11th April 2016

On 11th April 2016, the final day of the conference commenced with the preparation of workshop declaration. The President of Nepal Horticulture Society presented the workshop declaration, which was followed by the closing ceremony.

The closing ceremony was followed by the Annual General Meeting of Nepal Horticulture Society. Mr. Basu D Subedi, General Secretary of NHS presented the activities conducted by NHS in the past year, and Ms. Yam Kumari Shrestha, Treasurer of NHS briefly explained the financial statements of NHS. Finally, members of Nepal Horticulture Society elected a new executive committee under the leadership of a new president, Dr. Umed Pun.



Welcoming the Ninth Executive Committee of Nepal Horticulture Society from Left to Right: Dr. Umed Pun, Basu D Subedi, Kaushal K Poudel, Yam K Shrestha, Deepa Singh Shrestha, Drona R Kafle, Sanjay Dhimal, Dr. Umesh Achraya & Padma N Atreya



Newly elected President of Nepal Horticulture Society Dr. Umed Pun addressing NHS members

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