

## Seed Orchards and Climate Change

Report by Tomas Funda, Swedish University of Agricultural Sciences, Coordinator of IUFRO Working Party 2.09.01 Seed Orchards, <https://www.iufro.org/science/divisions/division-2/20000/20900/20901/>

From 14-16 September 2019, the IUFRO Seed Orchard Conference 2019 – Seed Orchards and Climate Change took place in Nanjing, China. A total of 206 representatives from China, Sweden, Korea Republic, Canada, Czech Republic, Denmark, Poland, Australia, UK, Japan, Russia, and Ethiopia attended the meeting. Meeting website: <http://seedorchard2019.njfu.edu.cn/index.html>

Owing to a number of oral and poster presentations given by Chinese researchers, the conference provided a great opportunity for foreign participants to learn about China's progress in seed orchards and forest tree improvement. For example, from 2010–2015 China was the world's leading country in forest area gain, with the net gain exceeding 1.5 million hectares per year, showing China's commitment to reducing the net carbon dioxide emissions.



The conference was organized under the auspices of the IUFRO Working Party 2.09.01 "Seed Orchards" and hosted by Nanjing Forestry University (NFU) in collaboration with National Forestry and Grassland Administration (NFGA), Key Laboratory of Forest Genetics and Biotechnology and Co-Innovation Center for Sustainable Forestry in Southern China. The Chair of the conference was Jisen Shi, Professor of Forest Genetics and Tree Breeding at NFU and Deputy Coordinator of the Seed Orchards Working Party.

*Participants of IUFRO Seed Orchard Conference 2019, Nanjing, China (Monday, October 14th, 2019). By courtesy of IUFRO Seed Orchard Conference 2019, Nanjing, China*

In order to attract scientists, forestry practitioners and students from a broader spectrum of related disciplines, the conference was co-organized with four IUFRO Working Parties: 2.09.03 "Seed Physiology and Technology", 2.04.02 "Progeny Testing", 2.02.23 "Breeding and Genetic Resources of Asian Conifers" and 2.02.07 "Larch Genetic Resources." It is a follow-up of activities initiated in 2007 by Professor Dag Lindgren (SLU, Sweden) with the aim of facilitating the exchange of knowledge on forest tree seed orchards as well as promoting new collaborations in seed orchard research. It was the 5th international conference of its kind; the first one took place in 2007 in Umeå, Sweden.

Three awards were presented at the Closing Ceremony: Best Oral Presentation by a Young Scientist to Ms. Ye Ji Kim (Seoul National University, Korea Republic); Best Volunteer Award to Mr. Zimou

Sun (NFU, China); and Dag Lindgren Award to Prof. Xihuan Shen (Beijing Forestry University, China) in recognition of his contribution to seed orchard research.

The session part of the conference was followed by a three-day excursion to Fujian province, China's model province for sustainable development in forestry. The conference was a nice blend of science, networking and sightseeing, leading to the establishment of several collaborations among Chinese and foreign scientists.

A broad variety of topics was covered, from seed orchard design and management, fertility variation and genetic diversity of seed crops, seed processing and treatment to gene conservation and adaptation of forest trees to changing climate and linking forest tree seed orchards with long-term breeding. In addition, genomic selection and its integration in forest tree improvement programs took up a substantial portion of the conference agenda – three out of fourteen keynote presentations were dedicated to this topic.

The next Seed Orchard Conference will take place in Bucharest, Romania and will be hosted by the National Institute for Research and Development in Forestry "Marin Dracea" (<https://www.icas.ro/>). The contact person is Georgeta Mihai, Deputy Coordinator of IUFRO WP 2.09.01 "Seed Orchards".

Read the full report at: <https://www.iufro.org/science/divisions/division-2/20000/20900/20901/activities/>