FOREST TREE IMPROVEMENT IN THE ASIA-PACIFIC REGION

Forest Tree Improvement in the Asia-Pacific Region. Xihuan Shen (editor). China Forestry Publishing House. 1995, 329 pp., price 50 USD, ISBN 7-5038-1590-6

The proceedings of the Asia-Pacific Symposium on Forest Genetic Improvement organized by the IUFRO WP 2.02-00, the Chinese Society of Forestry, the Chinese Academy of Forestry, and Beijing Forestry University, held on October 19–22, 1994 in Beijing. Scientists from 14 countries participated in the Symposium and presented eight invited and 38 voluntary papers.

The proceedings consist of six chapters: (I) Gene Resources Investigation, Utilization and Conservation, (ii) Geographic variation and Provenance Selection, (iii) Breeding Strategy, Technology and Genetic Evaluation, (iv) Commercial Multiplication of Improved Planting Stock, (v) Tissue Culture and Biotechnology, and (vi) Short Reports.

Half of the first chapter is aimed at the gene conservation and variation studies of the *Cryptomeria japonica, Fagus crenata, Pinus densiflora* and *P. thunbergii* in Japan, further on *Pinus wallichiana*, representatives of the genus *Populus*, as well as on the shrubby species *Hippophae rhamnoides*.

In the second half of this chapter five papers are published, aimed at the investigation of genetic diversity and differentiation of pine and *Larix olgensis*, and *Castanea mollissima* populations, inheritance of isozymes in *Pinus massoniana* as well as RAPD-based genetic analysis in natural populations of *Pinus densiflora* using isozymes and RAPD-markers.

Both the second and third chapters are aimed at classical issues of forest tree breeding including different aspects of provenance research, estimation of variance components and heritability, hybridization, and breeding strategies. Most of the fourth and fifth chapters are similarly aimed at the application of vegetative propagation and *in vitro* techniques in the breeding programs. There are, however, two papers using molecular genetic techniques, or genetic transformation in poplars, included in these section.

In general, the contributions cover a broad variety of tree species growing in China, from conifers to angiosperms, and from boreal to subtropical ones.

The proceedings are recommended to the forest geneticists not only in the Asian-Pacific region but also in other parts of the world to get an insight into present forest genetics and tree breeding activities in China and some other countries of the Asian-Pacific region.

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CONSERVATION AND MANIPULATION OF GENETIC RESOURCES IN FORESTRY

Conservation and Manipulation of Genetic Resources in Forestry. Zin-Suh Kim & Hans H. Hattemer (eds.). Kwang Moon Kag Publishing Co., Seoul, Korea, 1994, 347 pp., price 40 USD, ISBN 89-7093-0205

Proceedings of the first Korean-German Joint Symposium on forest Genetics which was held on September 10–11, 1991, in Seoul, Korea.

The proceedings contain 16 papers (eight from each country) which are arranged in four chapters: (I) Environmental Impacts on Genetic Variation, (ii) Effect of breeding on Genetic Variation of Tree Species, (iii) Role of Genetic Variation in the Biotechnology of Trees, and (iv) Resources Conservation Strategies Based on Genetic Variation Parameters.

The first chapter three papers are aimed on the impact of air pollution and acid rain on the genetic structure of plant populations.

The second chapter contains two papers aimed at the case studies of breeding programs and strategies for Korean poplar and pines. One paper is a theoretical study aimed at the impact of breeding on genetic structure and the last one the molecular relationships in Pinaceae family explained on isozyme loci is discussed.

In the third chapter are four papers aimed at *in vitro* propagation of forest trees, including the somaclonal variation and gene conservation issues. One paper is aimed at the application of *Agrobacterium* vectors for genetic transformation of poplars.

The last chapter is aimed at the case studies of the gene conservation of Norway spruce, Douglas fir, and pines. One paper presents the selection criteria for genetic resources.

The reviewed proceedings give a very good insight into the present state of the forest genetic research in Korea and good confrontation with the European trends in forest genetics represented by Germany.

Proceedings are very well printed and with regard to the high quality contributions they are highly recommended for a broader readership.

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