

THE STATUS OF TEMPERATE NORTH AMERICAN FOREST GENETIC RESOURCES

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Report of a workshop held 12–14 June 1995 in Berkeley, California, USA, in preparation for the International Technical Conference on Plant Genetic Resources (ITC/PGR). Written in an easily readable format and presented in attractive layout, this publication not only contains recommendations on forest genetic resources developed by the workshop participants, it also describes the status and seeks effective approaches to the conservation of genetic resources in temperate North American tree species. It is neither a proceedings nor a classical report; the information was to a great extent developed on the basis of workshop discussions and replies to a questionnaire conducted prior to the workshop. The analysis of the questionnaire included responses from Canada, Mexico and the United States with regard to the domestic status of North American temperate forest tree species, and from several distant countries (Argentina, Australia, Brazil, Chile, China, New Zealand, South Africa, and 6 European countries) on their use as exotic plantation species.

Following the introductory remarks, the executive summary and the list of 12 workshop recommendations, a separate chapter describes the natural conditions, species and the concerns about their genetic diversity in the temperate zone of North America. Central to all gene conservation issues is the lack of a comprehensive information base and its coordination. The next chapter explains that genetic resources in forestry and agriculture do have some common grounds, but conservation strategies for forest trees will generally not follow agricultural models. Several underlying reasons are mentioned, one of them being the process of evaluation of genetic resources in forestry.

The chapter on the status of temperate forest tree genetic resources in North America is divided according to the three countries. The existing reserves are almost exclusively defined on criteria other than genetic values. There are a few currently threatened or endangered tree species in Canada and the United States but concerns exist at the level of speciesDR populations. Species with commercial value have adequate genetic resources secured in reserves, genebanks or plantations. Mexico has the highest levels of species and genetic diversity, but loss of habitat through deforestation is affecting the range of many species.

The next chapter is devoted to the status of temperate forest trees of North America in countries where they are grown as exotic plantation species. Their

significance and scope, genetic reserves, laws, policies, influence of the land ownership patterns, ecosystem effects, biological threats to the exotic plantations and international transfer of germplasm are not only sub-chapters but also the issues of global interest for both *in situ* and *ex situ* conservation of North American temperate forest tree species.

It is stated that no systematic, coordinated national plans exist for the conservation of forest genetic resources in North America. The factors influencing their establishment, the mechanisms, components, different players, most important needs and opportunities, as well as an overview of gene conservation approaches and methods, are given attention in the following two chapters. The report then concludes with a chapter on emerging issues, in view of the effects of various political, economic and social changes on the conservation of genetic resources.

Twenty-five boxes with short case histories highlighting current issues of gene conservation and focusing on different species illustrate the chapters.

The original objective of the workshop was to provide a forestry input to ITC/PGR (held in Leipzig, Germany, in June 1996) and to its main document, the Global Plan of Action. The entire preparatory, country-driven process was facilitated by FAO Forestry Department, and included technical collaboration in the organization of the workshop. It was, however, later decided to exclude all issues related to forest genetic resources from the agenda of ITC/PGR, as no political consensus could have been reached among the delegations of the Extra-Ordinary Session of the Commission on Genetic Resources for Food and Agriculture at FAO, in April 1996. While there is a definite need to elaborate a Global Plan of Action for forest genetic resources to complement the existing agricultural Plan from the Leipzig Conference, the report of the workshop on temperate North American forest genetic resources is an important reference material and valuable source of information. It is therefore highly recommended to forest geneticists and to anyone interested in genetic resources of forest trees.

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