

FACTORS SHAPING GENETIC DIVERSITY OF FOREST TREES

Summary

The primary sources of genetic variation of any organism are mutation and recombination. Genetic diversity in a population is influenced also by other evolutionary forces, including natural selection, genetic drift and gene flow. Forest trees maintain generally high level of genetic diversity within species and within population but little genetic divergence among populations. Genetic diversity of forest trees is influenced by natural factors related with specific life history, ecological characteristics and evolutionary past of the species as well as anthropogenic factors, including forest management practices. In this

paper the influence of natural and anthropogenic factors on genetic diversity of forest trees is carefully considered in the light of existing theoretical knowledge and the most recent research results. A thorough understanding of processes shaping genetic diversity of forest trees is important in view of conservation and sustainable management of forest genetic resources. Maintenance of the most diverse genetic pools of forest trees is of fundamental significance for stands and whole forest ecosystems stability, being one of the most important tasks for modern forestry.