

Mohren, G.M.J., Kramer, K., Sabaté, S. (ed.): **Impacts of Global Change on Tree Physiology and Forest Ecosystems** (Forestry Sciences Volume 52.) - Kluwer Academic Publishers, Dordrecht - Boston - London 1997. 372 pp. NLG 295.00. ISBN 0-7923-4921-0.

This book represents proceedings of an international conference of the same name, which held 26 - 29 November 1996 at Wageningen, The Netherlands. The conference brought together biologists, ecologists, and forest scientists working in the field of impacts of elevated CO₂ and air pollution on tree physiology and forest ecosystems. The individual papers usually provide an entrance to a particular field of research and present overview of author's recent experimental work. The first section "Impacts of CO₂, air pollution and temperature on tree physiology" is the largest one containing 19 contributions. It is introduced by two general reviews. In this section, main attention is given to effect of elevated CO₂ concentration on growth, photosynthesis (from the chloroplast to plant level), respiration, and photorespiration. Many contributions try to answer question of occurrence and mechanism of down-regulation of photosynthesis under long-term growth of plants under CO₂ enrichment. In connection with this the interactions among elevated CO₂ concentration and other environmental factors (temperature, mineral nutrition, drought, pollutants) are evaluated. In addition to elevated CO₂, the impacts of ozone and sulphur dioxide are discussed. The second section "Impacts of global change on forest ecosystems" contains 13 papers. These contributions solve similar questions but mostly on canopy level. The impacts of climatic warming and the increased risk of water stress are also considered. The last section is "Modelling and integrated assessments". The 14 contributions present different models which simulate effects of environmental factors, including elevated CO₂ concentration, on forest stands, and predict growth and composition of forest stands in a future atmosphere. The Annex marked the completion of a European COST action on "Impacts of elevated CO₂ levels and air pollutants on tree physiology" (ICAT/COST-614).

The book is very important as it helps to establish a realistic picture of the response of deciduous and coniferous trees to global climate change.

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