

De Kok, L.J., Stulen, I. (ed.): **Responses of Plant Metabolism to Air Pollution and Global Change.** – Backhuys Publishers, Leiden 1998. ISBN 90-73348-95-1 (hardbound). 519 pp., NLG 240.00, USD 126.00.

The impact of global climate change on biosphere became one of the greatest problems of the recent world. Air pollutants and global climate change have gained renewed interest, following the present developments in molecular biology. The reviewed book is based on papers presented to an international symposium of the same name, held in Egmond aan Zee, The Netherlands, 1–5 April 1997; the symposium was already the fourth in a series of symposia devoted to these problems (Oxford 1982, Munich 1987, Blacksburg 1992).

The book contains 19 invited papers and 63 contributed papers, prepared by 221 authors. The papers present balanced views of the current areas and the recent developments on the impact on plant functioning of inorganic and organic gaseous pollutants, elevated CO<sub>2</sub> and connected parameters of global climate change, and their interactions. Thus, the reader can feel that the above mentioned symposium was stimulating and exciting.

The book is dedicated to J.B. Mudd, Emeritus Professor of Botany, University of California, Riverside, whose outstanding work and current ideas—On ozone—open the book. Eighteen invited papers are arranged in four sections, the titles of which give a true picture of the problems discussed—Air Pollution and Global Change: General Aspects (3 papers), Plant Responses to Air Pollution (7 papers), Plant Responses to Global Change (4 papers), and Genetics and Molecular Biology of Plant Responses to Air Pollution and Global Change (4 papers). Every paper is accompanied by more or less extensive list of references to relevant literature. The contributed papers respond fairly well to these topics. Majority of papers deals with ozone stress, tolerance and resistance, and with elevated CO<sub>2</sub> as a result of global change, alone or in interaction with other air components and pollutants. Other papers are focused to bioclimatological and ecological traits, and further components of air pollution, namely SO<sub>2</sub>, NO<sub>2</sub>, H<sub>2</sub>S, UV-B radiation, acid rain, heavy metals, herbicides, ethylene biosynthesis, water stress, heat and drought stresses, formaldehyde, light non methane hydrocarbons, ammonia, *etc.* Then, the effects of the above components and factors on functioning of various plant types are discussed, namely on photosynthesis, photorespiration, respiration, chloroplast pigments, growth regulators, photosynthate utilisation, source-sink relations, crop production, nitrogen metabolism, *etc.*

The comprehensive book is well edited and produced, and contains a fairly detailed Subject index. It may be recommended to plant scientists and graduate students interested in interdisciplinary approach to environmental sciences, global climate change, and air pollution.

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