Reddy, K.R., Hodges, H.F. (ed.): **Climate Change and Global Crop Productivity.** – CABI Publishing, Oxon – New York 2000. ISBN 0-85199-439-3. 472 pp. GBP 75.00.

The impact of global climate change – mainly the still increasing atmospheric CO_2 concentration and warming – on biosphere became one of the greatest problems of the recent world. The rate of global climate change expected over the next century is more than has occurred during the past 10 000 years. This will have profound effects on life on earth. The book is the first comprehensive examination of the potential effects climate change will have on crop production systems.

Twenty-one contributions to the book are written by 51 leading international authorities from Australia (1), Belgium (2), France (1), Italy (3), Japan (4), The Netherlands (2), New Zealand (1), Sweden (2), Switzerland (3), UK (3), and USA (28).

The book is divided into five parts. In the first one, (Introduction), the editors present an overview of the climate change and global crop productivity. Changing biosphere is the problem dealt with in the Part II (2 chapters). Chapter 2 is devoted to climatic change and variability (past climate effects, greenhouse gases, anthropogenic aerosols, future climate effects), and Chapter 3 summarises agricultural contributions to greenhouse gas emissions (fossil fuel use in agriculture, management of soil carbon, nitrous oxide and methan emissions, mitigation options for agriculture, *etc.*).

The voluminous Part III (15 chapters) discusses crop ecosystem responses to climatic change. Individual chapters deal with the most important agricultural plants and lands: wheat, rice, sorghum, soybean, cotton, root and tuberous crops, vegetable crops, tree crops, productive grasslands, and rangelands; besides, further chapters are devoted to problems of crassulacean acid metabolism (CAM) crops, crop/weed interactions, pests and population dynamics, soil organic matter dynamics, and interactive effects of ozone, ultraviolet-B radiation, sulphur dioxide, and carbon dioxide on crops.

In this Part, the readers of the journal Photosynthetica will found different interesting problems concerning photosynthesis, respiration, transpiration and water use, growth and development, mass partitioning, yield components, *etc.* Some of them are: methods for studying global environmental change and model simulations, effects of natural and elevated CO_2 concentration and temperature and their interactions on basic processes as well as production, CAM, CO_2 effects under water-limiting conditions, tree physiology, *etc.*

Two chapters of the Part IV – Mitigation strategies – discuss crop breeding strategies for the 21st century (plant responses to increases in atmospheric CO_2 concentration and in air temperature, crop water relations and pest relations under global climate change, *etc.*), and role of biotechnology in crop productivity in a changing environment (abiotic stresses, *etc.*).

The concluding Part V (1 chapter) presents economic and social impacts: global, regional, and local food production and trade in a changing environment (methods for estimating climatic impacts on agriculture, changes in climate due to greenhouse gases, future trends and issues facing world agriculture, world food security, *etc.*).

I like this book, it is a pity that it reached me so late. It is very well edited and manufactured, and supplied with a comprehensive subject index (more than 1 100 items). Individual chapters are accompanied with relevant literature (altogether more than 1 400 references). In my opinion, the book will be indispensable for researchers, teachers, and advanced students interested in environmental plant physiology, crop production and global production, agronomy, ecology, climatology, and other fields of plant and environmental sciences.

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