

Mavi, H.S., Tupper, G.J.: **Agrometeorology: Principles and Application of Climate Studies in Agriculture**. - The Haworth Press/Food Products Press, New York - London - Oxford 2004. 337 pp. USD 59.95. ISBN 1-56022-972-1.

Agrometeorology is an interdisciplinary science linking together understanding of physical environmental variables and biological responses in agricultural ecosystems. It has a wide spectrum of its own methodical approaches which are not only of descriptive character – much attention is paid also to interpretation of the observed relationships and to prediction of impacts of various expected environmental changes. Due to increasing importance of agrometeorology for more sophisticated terrestrial resource utilization, huge amount of scientific papers has appeared in specialized journals every year, but only few synthetic books are yet available. The reviewed volume is thus very demanded contribution to the filling of the gap.

The whole book is divided into eleven chapters. Three of them (following rather short introductory explanation of the scope and practical utility of agrometeorology) are devoted to description of the basic characteristics of the most important abiotic factors for plant growth: radiation, temperature, and water availability. In all cases, the descriptions are relatively short, but written in a quite clear style with many useful Tables and Figures. More specialized character had the two following chapters devoted to monitoring and mitigation of drought (extremely important not only for arid lands!), and to interactions between climate factors and different groups of crop pests or animal parasites.

In the second half of the book (Chapters 7 to 10) an overview of modern, more advanced approaches used in agroclimatology is given. To the most important and

rapidly expanding fields of methodical innovation belongs undoubtedly remote sensing, which uses wide array of instruments (both passive and active) for satellite or aircraft observations of large area of landscapes. Basic principles of principal techniques used in the remote sensing, including evaluation of collected data, are concisely described and accompanied by instructive colour pictures. Much attention is also devoted to simulation models of crop growth, which represent invaluable tools for a quantitative description of plant-environment relationships and for predictive evaluation of various in-season management decisions on cultural practices (*e.g.*, fertilization, irrigation) that are available for optimisation of crop yield. An overview and several examples of practical use of the most popular crop, pasture, and animal production models are given.

The last chapter is devoted to climate change and its impact on agriculture. It is introduced by explanation of probable causes of climate variability and expected climate change, and documented by several presently observed impacts of climate change on hydrology, plants and animals. Uncertainties of future climate variation and main approaches to development of expected climate scenarios are also briefly discussed.

This very readable book will be undoubtedly useful not only as a university text to students of a broad range of biological disciplines, but also as a useful source of basic information for agricultural research workers, managers and practitioners.

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