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BOOK REVIEW

ZADOKS, J. C., SCHEIN, R. D.: *EPIDEMIOLOGY AND PLANT DISEASE MANAGEMENT*. — Oxford University Press, New York—Oxford 1979. 427 pp.

The content of the book is divided into 3 parts and 12 chapters. The problems are described and discussed on three levels of biological organization, viz., the individual, population and ecosystem levels. The introductory chapter contains an explanation of the concept of epidemiology and its relations to other branches of science. Part One of the book is aimed at the elucidation of monocyclic processes. The authors explain, in considerable detail, problems associated with the analysis of epidemiological processes and their relationships. Particular emphasis is placed on the influence of environment in the epidemics of plant diseases. Part Two of the book is concerned with polycyclic processes. The pertaining problems are conceived on the level of host and pathogen populations. Considerable attention is paid to problems of simulation and modelling and of utilizing the models in studies of plant pathogen epidemics. Very valuable and quite unconventional is the consistent mathematical interpretation of all situations. One of the chapters is devoted to losses caused by plant disease epidemics. Part Three of the book is based on the system concept. Its content consists in the clarification of the ecosystem concept, the place of plant diseases within an ecosystem, the development and present status of agricultural ecosystems. This chapter is dynamically continued in a chapter devoted to the possible ways of controlling plant pathogens.

A characteristic trait of the book is its synoptic arrangement. The individual parts and chapters join one another in a logical sequence from the individual through the population up to the system. Particularly Part Three concerning the pathosystem, is of exceptional value. It can be said that this is the first comprehensive treatment of this problem in the worldwide literature (not considering the concept of plant pathosystem by R. A. Robinson who was the first to point out the possibility of a system concept in plant pathology).

The book satisfies the strictest criteria both as to its content and form. Plant pathologists can draw from it a vast amount of inspiring stimuli for further studies. The book is also of use for ecologists and other scientists specialized in related branches of science. It constitutes the peak of our present knowledge of the problems outlined above and in its content of thoughts and ideas it is ahead of time.

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