

Book review

G. M. Hoffmann, F. Nienhaus, F. Schönbeck, H. C. Weltzien and H. Wilbert, 1976. *Lehrbuch der Phytomedizin*. Verlag Paul Parey, Berlin and Hamburg, 490 pp with 101 illustrations, 62 schemes, 13 tables, name and subject indexes; Balacron paper cover, price DM 88.

Plant pathology has not escaped the analytical approach of natural sciences which has led to the disintegration of the field into an increasing number of highly specialized disciplines such as mycology, bacteriology, virology, entomology and nematology, with mycoplasmatology as a recently developing branch. Each discipline tends to develop its own terminology. It concentrates on the pathogen rather than on the affected plant, then ignoring the protection or cure of plants under natural conditions where these may simultaneously be subject to various pests and parasites, which are often interdependent.

The present German book is based on an entirely different, more functional concept. It emphasizes the diseased or damaged plant and aims at its therapy and protection in the complex natural habitat. It integrates specialized knowledge, not according to host or parasite or harmful factor, but to the relationships with and effects on plants. It provides much information on population dynamics and epidemiology and last but not least on plant therapy and protection. Hence, it concentrates on plant medicine (a term rather uncommon in English for pest and disease management) or 'phytatrie' (in French), the 'plant as a patient' being the central theme.

There is a short introduction on plant medicine, its history and economic importance. Chapter 2 deals with the various causes of disease and damage, such as abiotic factors, viruses, mycoplasma-like organisms, Rickettsia-like organisms, bacteria, fungi, algae and flowering plants (including weeds), nematodes, gastropods (snails), arthropods and vertebrates. Their characters and taxonomy are concisely described. Chapters 3 and 4 describe the various disease symptoms and plant damages, and the onset and course of disease. Chapter 5 is concerned with population dynamics and epidemiology. Chapter 6 analyses the various aspects of plant protection including such subjects as quarantine, breeding for resistance, chemical control, biological control and integrated crop protection. At the end of each chapter there are lists of further literature. These are of various length and mainly refer to German publications. Finally, two extensive indexes to names and subjects assist the reader when using the book for reference purposes. Many schemes and tabular surveys provide easy access to much information and the drawings (no photographs have been used) are very illustrative.

Of course, certain minor criticisms could be made. Personally, I would have preferred one general index instead of two. Why, for instance, list the term viroid in the name index instead of the subject index? By the way, viroids are not just protein-less nucleic acids (p. 36) but, more important, nucleic acids of such small size that they hardly contain sufficient information for one gene.

On the whole, the authors did a thorough job. Although the book has been written by university professors for students, it contains much valuable information for all those scientifically involved in crop protection in its widest sense, provided they have reading proficiency in German.

L. Bos