BOOK REVIEWS, continued

meager 12 pages of attention, while fertilizers (chapter 8) receive 15. Soil conservation, cultivation and weed control, and irrigation and drainage are dealt with in other chapters.

In spite of its limitations—lack of balance and coherence—soil scientists will be able to glean a certain amount of useful information on soil fertility in the tropics, a field of study which has been neglected when the enormous amount of information which has been accumulated in soil fertility in the temperate zones is considered. There is a bibliography of over 200 references and a comprehensive index.—A. W. Moore, The University College, Ibadan, Nigeria, Africa.

ADVANCES IN PEST CONTROL RESEARCH, Volume I


Pests have attacked man's food, his possessions, and his person for many centuries. Yet the last decade has witnessed more progress on the chemical control of pests than was known in all of previous history. The published record of research has become exceedingly voluminous. Articles are scattered in the journals of various disciplines. Therefore, the proposed comprehensive reviews on pest control and research is timely, and should do much to bridge the gap between chemists and applied biologists.


The subject index appears to be comprehensive in regard to names of both chemicals and organisms. Some measure of the scope of the ten reviews is indicated by the total of 1907 citations, ranging from a minimum of 57 to a maximum of 462 per article. All of the authors are associated with American institutions, except two from England. The majority of the reviews are written by well-known specialists; for example, A. S. Crafts (herbicides), J. G. Horsfall (fungi toxins), W. E. Ripper (systemic insecticides) and M. S. Schechter (chemical analysis). Authors were allowed editorial leeway in the style of reference citations. Some cite references by number while others by both number and name. The reference lists are in the style used by chemists (no title), except two articles that list references in a manner customary with biologists (with titles).

Review articles have increasing value in science as research becomes more diversified and complex. The present volume and the proposed volumes to follow should prove to be useful references for research workers in most aspects of applied biology.—Jouan T. Mazlin, University of Wisconsin, Madison.

Advances in Pest Control Research, Volume II


The second volume of the proposed series is devoted to the following subjects: The Fluid Kinetics of Application of Pesticidal Chemicals, Inactive Toxicity of Fungicides, Research Advances in Seed and Soil Treatment with Systematic and Non-systematic Insecticides, Isope Dilution Techniques for the Determination of Pesticide Residues, Wool Digestion and Wool Beating, The Relation of Chemical Structure to Activity for the 2,4-D-Type Herbicide and Plant Growth Regulator, Chemical Structure and Activity of DDT Analogues with Special Consideration of Their Spatial Structures, and The Spread of Insecticide Resistance in Pest Species. The authors are recognized authorities representing English, North American, Australian and German viewpoints. There is a total of 1286 references, ranging from 16 to 66 per chapter. The practice by some authors of including references to personal communications or to unpublished data seems questionable, and a discriminating reader may be at disadvantage as titles to journal articles are not given.

Several noteworthy reviews are included in this volume, particularly the contributions on Fluid Kinetics, Wool Digestion, and Relations of Chemical Structure to Pesticide Activity. Work on herbicides and insecticides will find that the reviews on pest control research are valuable reference sources. Readers also will be able to evaluate developments in the more important areas of research from year to year if the cumulative index presented in this volume is continued in subsequent volumes.—T. Moxlan, University of Wisconsin, Madison.

THE SCIENTIFIC PRINCIPLES OF CROP PROTECTION

4th Edition


The nineteen years which have elapsed since the third edition of this book was published have seen great strides taken by the pesticide industry in developing a host of new organic chemicals for all aspects of crop protection. During this period Dr. Martin has been in a singularly good position to evaluate the program that has been made in the field. As in the previous editions the author has provided, to the extent possible, a background and framework of "Scientific Principles" upon which to weave the information about the various methods of pest control. There is a brief discussion of resistance in plants to pathogens and to insects, of the influence of environment (in the broadest sense) on host development, and of the current status of biological control of plant pests. The final chapter deals with "the treatment of centers and vectors of infection." The major portion of the book, however, is devoted to the various groups of pesticidal chemicals themselves with the object of presenting to the biologist a survey of the physico-chemical factors involved in the use of the various types of chemical crop protectants as insecticides, fungicides, herbicides, fumigants and as seed and soil treatments.

The consideration of each type of chemical includes a discussion of the interaction between the chemical and the pest and between the chemical and the host plant. The author has attempted to bring together from widely scattered sources and to evaluate the fundamental information concerning the physico-chemical factors relating to the use of crop protection chemicals that are important now or that have been important in the past. In so doing the omission of certain specific materials is virtually inevitable, but appears to be at a minimum in this book. The relatively brief coverage of weed killers seems out of proportion to the current importance of and interest in herbicides.

The information is presented in a manner that will be informative to anyone concerned with the protection of crops whether they are trained in biology or in the physical sciences. For this reason, and despite the rather high cost, the book will be welcome by those who need an authoritative treatise covering the very broad field of crop protection.—J. E. Mitchell, University of Wisconsin.

Boor en Spade (Auger and Spade)


This is a publication of the Netherlands Soil Survey Institute, Subjects covered in the 12 papers include mineral deposits and pollen analyses in peats, sticking earth, connection between soil condition and archaeological phenomena, land classification based on new 1:200,000 soil map of the Netherlands, man-made soils, and observations on sand soils in Friesland. English summaries are given for each paper. As is usual with Dutch publications, the many photographs and diagrams are excellent and have English legends. Soils men concerned with genesis and morphology should find this book of interest.