

New Books . . .

Chemistry of the Pesticides

D. E. H. FREAR, 3rd. ed. 1955. D. Van Nostrand Co. Inc., N. Y. \$8.00. Reviewed by E. Y. SPENCER, Canadian Dept. of Agriculture, London, Ontario.

The third edition of this text is the successor to the second edition published in 1948 entitled *Chemistry of Insecticides, Fungicides and Herbicides*. The trend of developments is indicated by a rearrangement of chapters starting with synthetic organic insecticides, followed by natural organic insecticides and then inorganic insecticides. This last chapter is identical with that of the second edition. Subsequent chapters cover fungicides and herbicides. The chapter on adjuvants includes a section on synergists while a new chapter on rodenticides has been added. The special section on analytical methods has been deleted and replaced by mention of analytical methods along with the discussion of many of the individual pesticides.

It is unfortunate that there is such a time lag between the initial writing of a book and its publication. The publishing date is January 1955 but in the majority of chapters there are no references beyond 1952 with very few in 1953 and two in 1954 in the chapter on organic herbicides. In rapidly expanding fields as organic insecticides and fungicides this leaves a serious gap. Thus there is no reference to the work of the Dutch and Canadian workers on the fungicide nabam and much of the pertinent work on the organophosphorus insecticides has not been included.

The statement on page 298 that nabam, being water soluble lacks persistence for an agricultural insecticide, is not borne out by field experience and thus has been the cause for extensive research on this problem.

The discussion on schradan omits the important properties of insect specificity and low in vitro anticholinesterase activity. It is unfortunate that an attempt to offset this and literature references to 1952 is made by one review reference in 1954. Reference to "demeton" omits any mention of the commercial product being a mixture of two isomers.

Errors in names and structural formulae include "dehydroresorcinol" in place of "dihydroresorcinol" on page 103, an incorrect formula for captan on page 303 and the use of "cationic" instead of "anionic" on pages 304 and 305.

To conserve space and thus expand

discussion and references many of the structural formulae could have been consolidated and replaced the empirical formulae.

Some evidence of direct transfer from the 2nd ed. without checking is shown by reference to pages 197-200 on page 412 which should be pages 224-228 of the new edition. The section on polysulfides, especially page 381 is antiquated.

With the reservation cited at the beginning, this edition covers the chemistry of pesticides largely to 1952 in as detailed a manner as can be done for such a large subject in 469 pages. Its value would be increased by the simultaneous use of a more recent handbook such as *Martin's Guide to the Chemicals Used in Crop Protection*.

Perspectives and Horizons in Microbiology. A Symposium

Edited by SELMAN A. WAKSMAN. Rutgers University Press, 1955, \$3.50. Reviewed by W. H. PETERSON, Department of Biochemistry, University of Wisconsin, Madison, Wisconsin.

This little book contains the addresses delivered at the dedication of the new Institute of Microbiology, Rutgers University, June 7, 1954, and a group of scientific papers presented at a symposium in connection with the dedication.

The thirteen scientific papers deal with selected aspects of broad subjects, such as, the microbe as a whole, metabolic integrations of lysogenic bacteria, genetics of microorganisms, nutrition and enzymatic studies of mutants, metabolism of bacteria and molds, biological fixation of nitrogen, microorganisms and steroid transformation, unsolved problems of immunology, virus reproduction, challenging problems of antibiotics, and the relation of microorganisms to plants. (Conspicuous by their absence are any specific papers dealing with the perspectives and horizons of yeast research.)

Each paper is written by a recognized authority in the field and all are notably stimulating and readable. They will be as enjoyable to the reader as they were to the listeners at the time of their delivery. There is great unevenness among the various papers as to length and presentation. Some show evidence of very thorough sifting and documentation while others seem so general as to be almost pontifical because of the lack of references to source material. Even the high priests of microbiology should be willing to make evident the bases of their authority and sources of their inspiration.

All of the papers have one feature in common. They point out the existence of great gaps in our knowledge of the life processes of microorganisms. This is a timely and useful service and should stimulate further interest and fruitful research in this expanding area of science.

The Roger Adams Symposium

Papers presented in Honor of Roger Adams at the University of Illinois, September 3 and 4, 1954. John Wiley & Sons.

This series of 6 papers by Dr. Adams' former students is significant not only as a tribute to Dr. Adams but also as an indication of the widespread area of research which is the logical field of application of organic chemistry. The papers are all concerned with current fields of active investigation and include: *Steric Effects in Dyes* by Wallace R. Brode; *The Structure of Gliotoxin, a Sulfur Containing Substance*, by John R. Johnson; *The Structure of Nepetalic Acid*, by Samuel M. McElvain; *Chemistry of Flavylum Salts*, by Ralph L. Shriner; *Some Chemical Studies on Viruses* by Wendell M. Stanley.

A Survey of the Food and Feed Resources of the Union of South Africa

VAN DE WALL and ALVORD published by J. L. Van Schaik, Pretoria, 1954.

The problem of food resources of the Union of South Africa is of more than academic interest for the situation there is typical of that in many recently "backward or primitive" areas. Recent advances of medical science and public health have greatly increased the life expectancy while the birth rate has shown no leveling off. The result of this high survival rate is an almost geometrical rate of population increase, sometimes referred to by demographers as an explosive population.

This survey was undertaken to assess the present and future food resources of the Union of South Africa and to determine what will be necessary to feed its future population. The study concludes that only a small area of the country is suitable for crop production and areas of fertile soil are in many cases limited by lack of irrigation or water. The only hope for maintaining or improving the nutritional level of the population lies in improvement of agricultural practices. There is little discussion of how this improvement is to be obtained, but that is not the objective of the survey.