

New Books . . .

Commercial Fertilizers, Their Sources and Use

GILBEART H. COLLINGS, McGraw-Hill Book Co. Inc., New York. 1954. \$8.00. Reviewed by M. S. ANDERSON, Agricultural Research Service, USDA, Beltsville, Md.

THIS FIFTH EDITION is a splendid book on fertilizers. It should be welcomed by teachers, students, investigators, and industry. In this edition the author has brought the subject up to date. Many illustrations and tables are the same as in the fourth edition, but in some of these more recent data or other desirable information is added. An additional chapter entitled "Application of Liquid Fertilizers" describes the use of anhydrous ammonia and other liquid forms of fertilizer materials and mixed fertilizers for direct application to soil or irrigation water.

The production of fertilizers is followed from mining of raw materials to the application of finished goods to land. The influence of fertilizers upon crop production is discussed from varied viewpoints. Many readers should be interested in the

information given regarding the effects of different fertilizing constituents, including minor elements, upon various growing plants.

Statistical data regarding the manufacture and consumption of fertilizers as summarized should be of interest to a large number of readers.

A bibliography of more than 700 well chosen references provides the reader with easy access to a few of the best text books on soil science as well as to original data of many authors whose works are concerned with soils, fertilizers, and plants. The author has produced an excellent book.

Biochemistry of Amino Sugars

P. W. KENT and M. W. WHITEHOUSE. ix + 311 pages. Academic Press, Inc., New York, N. Y., for the original publishers, Butterworths Scientific Publications, London, 1955. \$6.80. Reviewed by M. L. WOLFROG, Department of Chemistry, The Ohio State University, Columbus, Ohio.

SINCE THE PUBLICATION in 1925 by the late P. A. Levene of his classical mono-

graph entitled "Hexosamines and Mucoproteins," a great deal of work and some progress has been effected in this field. The present monograph attempts to delineate the present status of the chemistry of those natural sugars in which an hydroxyl group of the sugar is replaced by an amino group. These sugars are constituents of important tissue polysaccharides and a number of the more exotic ones enter into the formulas of some of the newer antibiotics, as streptomycin and puromycin. The organic chemical aspects are treated herein fairly well and indeed they are not as yet very highly developed.

The biochemical literature, however, has been reviewed hurriedly and extremely inaccurately, and here the book shows evidence of grossly unscholarly work. A few of the many carelessly gathered citations may be noted. A statement (page 91) that the amino groups of heparin are *N*-sulfated is credited to Reinert and Winterstein (1939); the cited reference contains no mention of *N*-sulfate groups. On page 48, one reads that fucose is liberated under alkaline conditions and two references are cited for the statement; fucose is *not* liberated by alkali and the citations do not mention fucose. On page 111, last line, methione should be threonine. On page 114, line 7 from the bottom, the ratio 1 : 25,600 should be 1:256,000. Page 113, line 15, the substances stated to react with anti-O serum *do not*. These instances can be continued *ad nauseum*. There is no excuse for such irresponsible writing, and the book is not recommended.

Biochemistry, an Introductory Textbook

FELIX HAUROWITZ, John Wiley & Sons, 1955. \$6.75.

An introductory textbook designed to form the basis for a one-semester course in biochemistry for students of bacteriology, botany, chemistry, physiology, or zoology.

Pesticide-Fertilizer Mixtures

A situation report on pesticide-fertilizer mixtures is available free from the Agricultural Research Service, USDA. The 10-page booklet discusses their history, use, production, and price. A review of state recommendations and requirements states that as of June 1954, 26 states sanctioned use of the mixtures.

According to the booklet, commercial use of fertilizer-pesticide mixtures outstrips research findings about them, and it discusses some of the problems that research must solve in this field.

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