

ous problems, and the answers to these, together with useful tables, are found in the appendix.

C. E. WATERS.

MILK, ITS PRODUCTION AND USES, WITH CHAPTERS ON DAIRY FARMING, THE DISEASES OF CATTLE, AND ON THE HYGIENE AND CONTROL OF SUPPLIES. By EDWARD F. WILLOUGHBY, M.D., D.P.H. London: Charles Griffin & Co. Philadelphia: J. B. Lippincott Co. 1904. 12 + 259 pp. Price, \$2.00.

The general scope of this book and the object of the author are well indicated by the following portion of the preface: "Though the whole of the chapters will appeal equally to no man save, perhaps, the medical officer of health of a county, it would be well if every farmer and dairyman knew the ways and means by which milk may become a factor in the spread of disease, and had a rational conception of the nature of milk analysis. The analyst would be better able to draw sound conclusions from his estimations, if he understood the influence of breed, food and season on the composition of milk, and in this, as in so many subjects, the medical man is bound to endeavor to 'know something of everything.'" The book contains little that appeals directly to chemists. The treatment of the subject of milk analysis is far from complete. In stating the average composition of cows' milk, the author gives the fat as 3.8 per cent. and casein and albumin as 3.7 per cent. The relation of fat and proteids indicated by this average analysis does not represent American results, since in the United States milk containing 3.8 per cent. of fat would average more nearly 3.2 per cent. of proteids. Then the average analysis stated by the author gives casein as 3.3 per cent. and albumin 0.4 per cent. The normal relation should be nearer 2.50 per cent. of casein and 0.7 per cent. of albumin. The book appears, on the whole, to be carefully written and will be found of special value to veterinarians and health officers.

L. L. VAN SLYKE.

METHODS OF CHEMICAL CONTROL IN CANE-SUGAR FACTORIES. BY H. C. PRINSEN GEERLIGS, Director of the West Java Sugar Experiment Station. Published by Norman Rodger, Altrincham (Manchester), Price, 3s. 6d. net.

This little work of 90 pages is in large part the English version of a bulletin of methods issued originally in Dutch by the West Java Sugar Experiment Station. The English text first appeared in 1904 in the *International Sugar Journal* and is now

reprinted in book form, with the addition of many tables and plans not hitherto published. The name of Prinsen Geerligs certainly needs no introduction to those interested in cane-sugar, and the many friends of his previous work upon the "Sugar Cane in Java" will welcome this new book, previously inaccessible to many in the original Dutch.

The first part of the book gives in condensed form methods for the analysis of cane, bagasse, juices, press-cakes, *masse-cuites*, molasses, and sugars, together with a chapter upon calculations and interpretation of results. The remainder of the text deals with the reporting of results and the equipment of the sugar-house laboratory.

A complete set of tables for laboratory use and a model of books and forms for the sugar-house are given in the second half of the book.

Several of the methods described are open to some criticism, especially that of sampling juices, given as follows (p. 8): "During grinding small quantities of juice are continually taken from the gutters with a 10 cc. measure." Such a method is now obsolete in the best American practice, having been discarded for some form of continuous sampler, which requires no attention and gives a more uniform sample of juice.

The book is written entirely from a Java standpoint and local conditions in other cane-producing countries do not render all the methods described universally applicable. The method, for example, of determining the point of maturity of the cane-field (p. 4) would be valueless in Louisiana. But apart from such minor criticisms this new publication will prove of great value to the sugar-house chemist, even if its directions be not followed in every particular.

C. A. BROWNE, JR.

SELECT METHODS OF FOOD ANALYSIS. By HENRY LEFFMANN and WILLIAM BEAM. Philadelphia: P. Blakiston & Co. Second Edition. 1905. 596 pp. Price, \$2.50.

During the last five years great progress has been made in the field of food chemistry, and many valuable methods and results of analyses have been published. The trend of modern investigation has been largely along the line of simplifying processes and suggesting "short cuts" to methods too complicated and intricate to be of practical value. This newer material has been well digested by the authors in the second edition of their book, re-