

of Microorganisms in Milk and Milk Products, 310 pp.; (4) Occurrence and Activities of Microorganisms in Barnyard Manure, 73 pp.; (5) Occurrence and Activities of Microorganisms in the Soil, 280 pp; Index, 115 pp.

No attempt is made by the author to discuss the bacteriology of water, sewage and sewage disposal. Evidently these topics appeared to him as belonging properly to the domain of sanitation, rather than that of agriculture. Similarly the rather extensive body of facts relating to bacteria pathogenic to higher plants is not considered by the author. While this may appear unfortunate to some of us, it must be admitted that he had good reason for this omission, since any discussion of plant-pathology from the bacterial standpoint alone must of necessity remain incomplete and one-sided. To secure completeness, one would have to consider the more or less distinct field of mycology, a task that would be hardly pertinent and far from simple.

To the American student this volume will prove of especial interest, because of the very satisfactory review of American data. The author deserves much credit for the thoroughness of this part of his work, particularly since he had to depend for his material almost entirely on the Experiment Station Record. Incidentally this achievement may be regarded as a splendid compliment to the editor and staff of the Experiment Station Record. For instance, the reference material on ensilage; on the numbers and kinds of bacteria in milk as influenced by handling and treatment; and on the ripening of hard and soft cheeses is reasonably complete. The same may be said of much of the soil-bacteriological work of the Delaware, North Carolina and New Jersey Experiment Stations.

Everything considered, the Handbook should prove serviceable to every student, teacher and investigator in the domain of agricultural bacteriology. All of these will feel indebted to the author for the many hours of tedious searching in books and journals that he will have saved them. They will, no doubt, appreciate also the helpful discussion of methods and culture media that represents one of the valuable features of the book.

JACOB G. LIPMAN.

**Laboratory Exercises in General Chemistry.** WILLIAM MARTIN BLANCHARD, Professor of Chemistry, Depauw University. The Chemical Publishing Company: Easton, Pa. pp. 88. Price, \$1.00.

This is a laboratory manual in general chemistry "arranged to meet the needs of college students who have had no previous training in chemistry." While there is little original material in the book, the experiments are well chosen and carefully written and include a number of quantitative experiments. To perform those given will require about six hours a week during the college year.

C. W. BALKE.