BOOK REVIEWS

Approximately one-half of the book's 678 pages is devoted to covering such topics as what microorganisms are, how they are studied, and what effects their growth and development. About one-fourth of the text covers applied microbiology and the remainder of the presentation is on pathogenic microbiology. Only 20 pages are used in describing "Cycles of the Elements in Nature" and "Microorganisms in Soils."

The principal criticism of the book is that definite literature references are not given. Therefore, the reader will not be able to pursue any particular topic in which he becomes interested unless some other text containing a bibliography is used.—J. C. GAREY.

REFERENCE BOOK OF INORGANIC CHEMISTRY


Reference Book of Inorganic Chemistry is the third edition of this book, first published in 1929. According to the authors, added emphasis has been put on thermo-dynamical data, such as oxidation potentials, equilibrium constants, and free energies. Oxidation-reduction potential diagrams have been given for almost every element.

A new chapter on actinium and the heavier elements has been added. More attention is given to plutonium and the other new transuranium elements. The chapter on the atomic nucleus has been rewritten to include all general types of nuclear reactions. More information has been included in the chapters on boron, phosphorus, and silicon.

The book assumes a familiarity with the field on the part of the reader. The authors suggest that it has not been "written down" to the level of elementary students. Thus, it can be expected to have its greatest value for persons with somewhat more than an elementary knowledge of chemical terminology.

SOIL SURVEY MANUAL


Review No. 1

A very different publication from the early edition of 1937, is the Soil Survey Manual issued in August 1951. It has been entirely revised and in the process become more than three times as large. The sections listed in the early edition are amplified or rather, rewritten, and several subjects, such as color, consistency, and structure are expanded to form main section headings. As is to be expected, that almost indispensable aid to soil science—aerial photography—is very fully covered. Well developed also is the section on yield production and soil management practices, aspects that the New Zealand soil surveyor is not directly concerned with.

The new Manual compared to the early one is a record of progress during the past 14 years—a record that should give a feeling of pride to soil scientists (or pedologists!). Symptomatic of this progress is the move forward into definitions, many of which as the authors realize will be improved from time to time.

Altogether the Manual is tops. The members of the staff of the Division have written the various sections, and the Chief of the Division has successfully handled the tremendous job of unification.

Foreign soil scientists look to U.S.A. to give a lead in how to make soil surveys, and a study of the Manual shows they will be far from disappointed.

The section on boron in the text, which I believe more emphasis could have been placed on the auger to check and in more cases than is important boundary.

Topsoil and subsoil, popular names for soil which be terms difficult to define and poor, respectively. They are very helpful in writing reports that I will read, believing they understand that the topsoil layer and the subsoil, the layer below it, are where roots grow.

The classification of stoniness (p.217–18) be noted when the designation of the soil shown in Figures whether the soil is productive. It may be held firmly classification of stoniness applicable to all utilized.

It is of interest to note that the soils of pH 5.1–5.5 are strongly acid (p.235), whereas in New Zealand pH between 5.2 and 6.0 are rated as moderately acid. Reference no doubt is due to the fact that there is much in U.S.A.

Soil family groupings have been tentatively based on criteria, based mainly on the soil horizons (p.301). Soil scientists have found that the most useful is the suite based on parent material, e.g. Taupo suite, rhyolite pumice and Kaharoa Suite from hard rhyolite. A brief section on how to interpret chemical analysis would have been useful, and it would have been helpful if the U.S. Dept. of Agriculture classification for domestic classes been dropped (p.208).

The impression is gained that the Division has to the objective of building a science of soil science and has allowed itself to be caught up in short cut schemes that people interested in a particular phase of land use. Lines that are now available in manual form the U.S.A. produces the workman-like bulletins on the soils of separate counties that can be used by a variety of people.

The Manual stops short only of teaching the art of soil surveying—the feel of what to recognize, how many to usefully and skillfully establish in his own work. The soil scientist to the stage where, if he develops the art, he can agree with the remark of one of the authors, "The rewards of work well done can be very satisfying, both intellectually and emotionally."—L. I. GRANGE.

Review No. 2

This greatly improved edition of the Soil Survey Manual, was first issued by Dr. C. E. Kellogg in 1937, four times as large as its predecessor. It reflects the improvements and developments in techniques, surveys, cartographic expression of the results, and terminology for describing the soil mapping units of the United States. Especially commendable is the addition of the relationship of soil surveys to closely related research and the emphasis on their values in many fields for various purposes. The newer concept of soils as dimensional landscapes, an important advance in our knowledge of natural bodies, is presented.

The recent laudable progress toward a more complete for the description of the color (Munsell notation), texture, consistency, permeability, stoniness, and salinity in the United States is summarized. With the rapid development of this field of soil science it is inevitable that there are differences in terminology and ideas about soils throughout the country. While one side of controversial issues is developed, the other may be far from disappointed.