

# New Books . . .

## Tropical Soils

### A Critical Study of Soil Genesis as Related to Climate, Rock, and Vegetation

E. C. J. MOHR AND F. A. VAN BUREN. Interscience Publishers, Inc., New York. 1954. 498 pages. \$9.00. Reviewed by J. S. JAFFE, Rutgers University, New Brunswick, N. J.

In many respects this volume is a revised edition of the senior author's volume, translated by Pendelton under the title *Soils of Equatorial Regions*. It deals primarily with the soils, rocks, and minerals in the tropics, the former Dutch East Indies, now Indonesia, supplemented with some data of the tropics in other parts of the world. The subject matter is presented in 16 chapters. The first one considers climate, with special emphasis on *soil climate* as the principal factor of the soil forming processes. In reality the so-called *soil climate* is nothing more than an expression of the temperature-moisture relationships in the soil controlled by the zonality principle reflected through the climatic elements of the tropics. Forgetting this belabored concept one is impressed with the analysis of the climatic elements in relation to vegetation. The odd 100 pages are replete with valuable information which the pedologist, agropedologist, plant physiologist, agronomist, and even microbiologist may use to advantage. An excellent review of soil air is taken up in the last 15 pages of the 100.

The authors introduce some new concepts such as "*life-containing soil climate*, *lifeless soil climate*." In this connection the authors use the term "*biosphere element*" as a part of their concepts on *soil climate*. They associate this biosphere element with the temperature-moisture relationships in the soil with reference to depth of penetration of roots. They have no orthodox pedologic approach in coordinating the factors of soil formation. The concepts pedology and soil science are erroneously used in a similar sense.

Chapters II-VI (about 140 pages) present detailed and highly instructive data on the rocks and minerals, their weathering and present status in the soil material. This is followed by a short chapter (10 pages) on mechanical analysis of soils. The system is that used by the erstwhile U. S. Bureau of Soils where Mohr had spent some time in 1905.

The chapter on organic matter, barely 20 pages, is disappointing. It contains none of the new concepts introduced by the workers in Russia, U. S., Canada, and England. They lean heavily on the older ideas which have monopolized the stage

of soil organic matter up to 1940 and which have since been practically abandoned as ancient history.

Chapters IX-XV (about 190 pages) discuss the formation of tropical soils in a pseudo-pedologic approach. Actually it is more of a geologic approach. In spite of this shortcoming, the factual data present a wealth of information to the pedologist, agronomist, and even plant physiologist. The authors discuss the highly interesting phenomenon of buried soils which are abounding in the areas of volcanic activity, as is the case in Indonesia.

The book is excellently illustrated, not with just photographs, but with interpretative charts, diagrams, figures, and tables. A more careful editing would have smoothed out some of the rough passages and avoided such strange terminology as *soil liquid for soil water extract*. However, remembering that this is a translation from the Dutch, these inadequacies are to be excused. The volume is a welcome addition to the meager literature on the subject of the soils in the tropics. No teacher in the field of soil science, let alone pedology, can afford not to have at his disposal this rich source of information.

## Food Selection and Preparation

MARION D. SWEETMAN AND INGEBORG MACKELLER, ix + 645 pages. John Wiley & Sons Inc., 440 Fourth Ave., New York, N. Y. 1954. \$6.50. Reviewed by DOROTHY L. HUSSEMAN, School of Home Economics, University of Wisconsin, Madison, Wis.

This book is somewhat unique among books which appear under similar titles because of the many angles from which the science of food is presented. In overall plan, the book is divided into four sections. The first section deals with the appraisal of foods from the standpoints of nutritional quality, digestibility, sanitary quality, palatability, and economy; the second section deals with food processing and this is defined by the authors to include methods of food preparation and methods of preservation; the third section presents a discussion of the general structure of food materials including the various types of dispersions found in foods or brought about in food preparation; the fourth section, which comprises about two thirds of the book, includes a discussion of the principles of selection and preparation for each of the major food groups, i.e.—fruits and vegetables, milk and its products, eggs, meat and allied foods, fats and oils, sugars and food mixtures high in sugar, and grains and

their products. Each chapter in the fourth section of the book seeks to evaluate the food group in light of the points established in section one.

The book is written in a lucid and highly orderly way. Its greatest value perhaps is in the integration of the many facets which present themselves when food is being discussed. It is unavoidable in covering such a breadth of subject matter that some of it must be done rather superficially. The literature citations are very limited in number. The authors state in the foreword, however, that they have not attempted to present an exhaustive bibliography. The book seems to be thoroughly modern in that it includes discussions of current concepts, methods, and procedure.

## Official Publication No. 8, Association of American Fertilizer Control Officials

B. D. CLOANINGER, Secretary, Clemson S. C. \$2.00.

This annual volume contains the proceeding of the meeting of the AAFCO held in Washington in the Fall of 1954. It also contains information on current fertilizer laws and regulations.

## Weather or Not

Sound color film, 21.5 minutes. Available from NATIONAL FERTILIZER ASSOCIATION, 616 Investment Building, Washington 5, D. C.

Increases in farm profits which can be obtained with a combination of fertilizer and irrigation are shown in this educational movie.

The various requirements for an efficient and profitable irrigation system are discussed with emphasis on the requirements of the humid regions east of the Rocky Mountains.

## Corn's Hidden Enemies

Sound color film, 12 minutes. Available from Shell Oil Co. Film Laboratory, 634 South Michigan Ave., Chicago 5, Ill.

The movie follows the story of a farmer whose crop is ruined by soil insects and who takes steps to solve the problem the next year.

The importance of the county agent is emphasized for he is called in by the farmer, and in turn goes to the professor at the agricultural college for the expert advice that solves the problem.

Detailed pictures of the use of Aldrin applied to the soil before planting and the results of control over insects are shown.