Book Reviews

SOIL MANAGEMENT FOR CONSERVATION AND PRODUCTION. By R. L. Cook, John Wiley & Sons, Inc., 440 Park Avenue, South, New York City 16, N. Y. 327 pp. 1961. $9.95

The author's experience in the soil management field has enabled him to write a very informative text on the subject. He has also included research information from other specialists working in different soils and climatic areas. As a result this book embodies modern-day concepts of soil management and conservation techniques of soil and water erosion.

The first 13 chapters deal with the major principles of soil management: namely, moisture relationships, structure, fertility, conservation measures, rotations, soil acidity, modern concepts of tillage methods, and other related information.

It is well known that the selection and application of cultural management and mechanical erosion control measures must be varied according to the kind of soil and climate. This is brought out in the six chapters that deal with different climatic and soils areas. These include the Great Plains, North Central States, North-East, Southeastern States, and Florida and adjoining Flatwoods. Each of these chapters contains a general description of the major soil areas involved, and methods being used to properly manage the land.

Also included are separate chapters on the management of organic soils, greenhouse soils, turf, and forest soil management. This is a well written book, easily understood, and contains a great deal of information. It should be valuable as a college text book, or as a reference work for soils specialists, and as a useful guide to soil conservationists.

Even though western agriculture is not specifically discussed, the information is applicable to that section of the country.—R. B. BLAKELY, Soil Conservation Service, USDA, Washington, D.C.


The handbook contains a wealth of information in condensed form previously available only in many books and bulletins. It will be a convenient and excellent reference for practicing agricultural engineers. For engineers with one specialty, the handbook will not be completely adequate for that specialty, but will provide quick reference to related subjects. Members of SSSA will be primarily interested in Section II, Soil and Water Conservation, parts of Section I, Crop Production Equipment, Section III, Farmstead Structures and Equipment, and parts of Section IV, Basic Agricultural Data. Briefly the 880-page handbook contains the following material:

Section I—Crop Production Equipment—C. B. Richey, Editor

Chapters 12 to 19, have information that will be of direct use to SSSA members. The chapters briefly present tillage objectives, principles and characteristics of moldboard plows, disk tools, shovel and sweep tools and minor tillage tools; objectives, principles and characteristics of fertilizing and liming machines, seeding and planting machines, sprayers and dusters, and mowers and crushers.

Section II—Soil and Water Conservation—Paul Jacobson, Editor

Section II was written primarily by USDA, SCS personnel presenting material not readily available to the general public, but currently in general use. Some chapters give step by step design procedures and others give primarily principles depending on the author. Most chapters provide references for more detail. The chapter titles and authors are as follows:

Chapter 34, Principles of agricultural hydrology, by Lloyd L. Harrell. 371 pages, of which 31 are references. This book contains 250 pages, of which 31 are references. This list of references is quite comprehensive and the book is well indexed. The following chapter headings give an idea of the scope of the book: History of Methods of Investigating Micro-Nutrient Problems, Trace-Element Deficiency Diseases of Plants, The Effects on Plants of Trace-Element Excess, Factors Influencing the Absorption of Trace Elements and Their Effects on Plants, The Functions of Trace Elements in Plants, Trace Elements in Plants in Relation to Some Diseases of Grazing Animals, and Concluding Remarks.

The trace elements covered by Stiles in the book are manganese, zinc, boron, copper, molybdenum, and cobalt. Iron is not included. Sixteen black and white photographs showing various deficiencies and toxicities in plants are presented.

The book is quite comprehensive on the influence of trace elements in plants, but contains very little on the influence of soils on trace element availability. It is up to date, well written, and easy to read.—R. C. BERGER, University of Wisconsin, Madison.