BOOK REVIEWS, continued

DIE WICHTIGSTEN BODEN DER BUNDESREPUBLIK DEUTSCHLAND
(The Most Important Soils of the German Federal Republic)
By E. Muckenhause, in German, Verlag Kommentator GmbH., (16) Frankfurt/Main, Schumannstrasse 29, Western Germany, 146 pp. (1956) linen, 28.00 D. Marks.

Of particular value in the field of soil classification, both for the layman and the scientist, is the recent publication "Die wichtigsten Boden der Bundesrepublik Deutschland" (The Most Important Soils of the German Federal Republic) by Prof. Dr. E. Muckenhause, Director of the Institute of Soil Science at the University of Bonn in Western Germany.

Limiting himself to the presentation of sixty carefully chosen soils found in Germany, the author begins by discussing the factors of soil formation. This forms the basis for the following chapter on the classification of German soils according to the system developed by the author in cooperation with the Commission for Soil Systematics of the German Soil Science Society. The introductory chapters also include a discussion on the designation of soil horizons, soil color, humus content, soil type and structure, and various physical and chemical soil analyses.

Each soil profile is shown in color using a four-color print system. The original to each of these color prints was a hand-painted watercolor drawn by specialists using actual soil samples and color photographs as references. Such a method has two main advantages. First, all typical characteristics of a soil profile which are often scattered along the profile wall may be combined into a relatively narrow profile painting. And second, it is possible to accentuate important characteristics if this is deemed necessary or advisable. Both of these advantages have been used so skilfully that the purpose is fulfilled without producing an unnatural picture.

Each printed profile has a length of 25 cm. so that small details are still recognizable. An exact description of the profile is given on the right side of the picture; the horizon symbols are found on the left. An indication of each profile is in which the following points are considered: (1) soil typological designation, (2) development, (3) physical, chemical and biological characteristics of the soil, (4) possibilities for improvement, (5) agricultural use, including recommendations for agricultural and forestry purposes, and (6) distribution of the particular soil. Results of soil analyses are also presented. The interpretation is so well formulated that the logical and distinct relation between the dynamics, characteristics and properties of a soil and its profile development becomes apparent. Another advantage of such a compilation of colored soil profiles is the possibility of direct comparison of different soil types.

The author and the publishers have accomplished a remarkably successful task in the presentation of the colored profiles. The international scientific value of such a book should be readily recognizable. The first edition was exhausted almost immediately after publication; however, a second edition will be available in spring of 1959.—E. A. Rossaw, Iowa State College, Ames.

INTRODUCTION TO AGRICULTURAL ECONOMIC ANALYSIS

This book was written primarily to provide undergraduates with the fundamental principles needed for applying economic analysis to agricultural problems. In the Introduction, as elsewhere, basic terms are defined, and the operation and functions that must be performed in a free enterprise economic system are discussed.

In section II, Production and Supply, the concept of the production function is explained, as well as that of marginal analysis. Examples from recent agricultural literature are used to indicate how one arrives at the most profitable level of output of a product, using the production function and price ratios. Costs and their relation to level of production and profitability are discussed as well as the allocation of inputs or resources so that a given level of production can be obtained at the least cost. Problems of resource allocation be-
tween or among enterprises and the criteria required for determining the profit maximizing combinations are also covered. Also included in section II are discussions of time, risk, and uncertainty and the influence that they have on production, land tenure plans and the influence that different plans exert on resource use and output, and agriculture supply and how and why output responds to price changes in the manner in which it does. The primary "tools" for analyzing economic problems are presented in section II, but much would be missed if the remainder of the book were not read to place it in the proper perspective with the desires and needs of the consumer.

Consumption and Demand, section III, indicates the importance of the consumer and the necessity of providing him with the products desired. Consumers' responses in purchasing different agricultural products when prices change is explained, and long-term trends in consumption of various products are discussed. International trade and its influence on the agricultural market is also covered. Cyclical and seasonal price variations of certain commodities are discussed. Also, the concept of "parity" is covered in a very understandable manner, as is the method of determining various indices used in that connection.

The section on Economic Progress covers the technological improvements, population trends, and disparity of income in relationship to agricultural production trends and needs, and indicates their influence on the growth of our economy. The authors are to be commended for having produced a very readable book that should be useful to those teaching agricultural economics or economic analysis. The book would have been more useful had problems been included so that students could gain experience in conducting analyses with different production functions. However, this is seldom done even in more advanced texts. Ample examples exist in the literature for those who are willing to seek them.—Ronald D. Munson, American Potash Institute, St. Paul, Minnesota.

MENTION
Physical Planning in Connection with Land Reclamation and Improvement, Publ. 1

This is a publication of the International Institute for Land Reclamation and Improvement, located at Wageningen. The main text is in English with a summary in French, German and Spanish. The material covers definitions of terms, differences between land reclamation planning and land improvement planning (for old and new areas), elements of physical planning in land reclamation and improvement (includes water management, farm size, settlement, transport, land use planning and administration), and physical planning in the past. The purpose of this publication is to point out the need for physical planning in land reclamation and improvement and to indicate the more important aspects.

Subirrigation in the Zuiderzee Folders, Publ. 2

Another publication of the International Institute for Land Reclamation and Improvement, this deals with the choice of the irrigation system, principles of subirrigation, technical aspects, drought phenomena occurring despite subirrigation, and subirrigation administration. Examples are given from conditions in the Northeast Folders where 20,000 acres are irrigated. American irrigation specialists will find this publication of value. The main text is in English.

The Auger Hole Method, Bull. 1

A publication of the International Institute for Land Reclamation and Improvement, this covers a field measurement of the hydraulic conductivity of soil below the water table. Included are discussions on drilling the holes, removal of water from the holes, and the relationship between the rate of rise, computing the hydraulic conductivity from the data of measurement, auger holes in a layered soil, and possible errors and variations. It is entirely in English.