BOOK REVIEWS

Drainage Engineering


Dr. Luthin's Drainage Engineering is an up-to-date textbook, on the theory and practice of land drainage. While written primarily for students in agricultural and civil engineering, it will be of considerable usefulness to soil scientists and others interested in subsurface hydrology. Although the book emphasizes the design and role of various drainage systems, it is strongly supported by five chapters on soils and others on hydraulics, seepage analysis, rainfall, and runoff. Primary emphasis is placed on subsurface drainage.

Most of the extensively-used equations in subsurface drainage are derived. The chapters on soil water are of particular interest to soil scientists, and the author's considerable experience in subsurface drainage is reflected in the excellent chapter on this topic. Overall, the book is a gratifying blend of soil science and hydraulics with the author's experience in drainage, research and teaching. Perhaps its greatest asset is its emphasis on basic principles, particularly in light of recent developments in drainage. Others will welcome the book as a convenient source of subsurface hydrology.

Persons interested in surface drainage may be somewhat disappointed in the limited space given to this topic. Further emphasis on water quality, salinity, and the role of evapotranspiration would also have been an asset.

All in all the book will be of considerable value to engineers and scientists working in subsurface hydrology and, in particular, to those engaged in land drainage.—GEORGE S. TAYLOR, Agronomy Department, The Ohio State University, Columbus, Ohio.

Advances in Corn Production
Principles and Practices


The Chevrion Chemical Company sponsored a Corn Congress at Delavan, Wisconsin in October 1964. Recognized authorities were asked to prepare comprehensive reviews of selected topics covering principles and practices of corn production. The 16 chapters of this book constitute the review papers presented at the symposium.

The program was developed for an audience seeking a general, but basic, understanding of the various aspects of corn production. Each chapter is followed by a bibliography which should prove useful to those interested in exploring topics in more detail.

The subjects covered include: soil suitability and cropping systems; seedbed and tillage requirements; date, rate, and pattern of planting; selection of hybrid seed; water supply and use including irrigation and drainage; fertility requirements for major and micronutrients; and the control of weeds, insects, and diseases.

Dr. Pierre's Drainage Engineering is an up-to-date textbook, on the theory and practice of land drainage. Each chapter is followed by a bibliography which should prove useful to those interested in exploring topics in more detail.

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No two organizing committees would be expected to completely agree on topics to be covered or the relative importance to be given each. Many of the recent major developments in corn production are adequately covered in this presentation. The major omission involves progress in the harvesting, drying, and storage of the crop produced. In the section on "Selection of hybrid seed", the rapid shift from double to single-cross hybrid seed is ignored.

In general, however, this book has achieved its purpose and will provide a useful source book to all interested in corn production.—G. F. SPRAGUE, Crops Research Div., ARS, USDA, Beltsville, Md.

A Genetikus Uzemi Talajterkepezes Modszerkonyve
(The Handbook of the Large-Scale Genetic Soil Mapping)


This volume is a comprehensive manual of soil survey. Excellent illustrations feature the methods of soil analyses, representative soil profiles, and soil maps. The soil classification uses simple and meaningful terminology which is closely related to that of the Russian school of pedology. The cartography extends beyond the somewhat ambiguous title of the book. In addition to genetic features, mapping includes depth of soils, their content of humus, stoniness, degree of erosion, state of drainage and other important but not necessarily "genetic" soil properties.

The treatise is a valuable contribution to the agriculture of Hungary and deserves attention of soil survey specialists in other lands. Excellent summaries in English and three other languages may be very helpful in compilation of an international pedological dictionary. Separate sections are supplemented by lists of references including largely pertinent Hungarian publications. Both printing and binding are of high quality.—S. A. WILDE, Soils Department, University of Wisconsin, Madison, Wis.