Book Reviews

ANNUAL REVIEW OF PLANT PHYSIOLOGY, Vol. 8
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This is the annual issue reporting recent advances in plant physiology. As with each of the past issues this volume is made up of separate discussions of many phases of physiology, each by a specialist if not by the leading authority in the field. The high quality and completeness of each discussion in this issue continue the precedent established by the previous seven volumes.

Since the book is made up of 19 discussions (chapters), each an entity in itself, a general review of the whole book would be of little value and a discussion of any one chapter would be of service to only a limited number of readers. A complete discussion of all chapters is of course not possible here. Therefore, it seems most fitting to list the chapters and authors so that readers may know the general areas covered and their particular interest in the book.

Chapters and their authors are as follows:

The use of aquatic plants in the study of some fundamental problems, W. J. V. Osterhout; Apparent free space, G. E. Briggs and R. N. Robertson; Mineral nutrition of plants, H. G. Gauch; Nitrogen metabolism in plants—ten years in retrospect, F. C. Steward and J. K. Pollard; Photochemistry of chlorophyll, J. L. Rosenberg; Biochemistry of chloroplasts in relation to the hill reaction, K. A. Clendenning; Auxin relations in roots, B. Aberg; The history and physiological action of the gibberellins, B. B. Stowe and T. Yamaki; Stock and scion relations, W. S. Rogers and A. B. Beakbane; Ascent of sap, K. N. H. Greenidge; Drought resistance in plants and physiological processes, W. S. Iijima; The sugarcane plant, G. O. Burr, C. E. Hatt, H. W. Brodie, T. Tanimoto, H. P. Kortschak, D. Takahashi, F. M. Ashton, and R. E. Coleman; Mass culture of algae, H. Tamiya; Permeability of plant cells, R. Collander; Physiology of phloem, K. Esau, H. B. Currier, and V. I. Cheadle; Physiological ecology, K. W. Billings; Physiological genetics, J. T. Conson; Effects of antibiotics on plants, P. W. Brian; Soluble oxidases and their functions, W. D. Bonner, Jr.

Anyone even remotely connected with production phases of agriculture or anyone interested in any of the special phases of plant physiology would find something of interest in almost every volume of this series and Volume 8 is no exception. These volumes are planned well in advance of publication but nevertheless contain most current information. All previous volumes of this series are also available at the same price. This seems an ideal way to keep up-to-date on the plant physiology field.

PHYSICS OF FLOW THROUGH POROUS MEDIA

Research workers find it increasingly difficult to keep up with the literature in related subject-matter fields. Geology, soil mechanics, petroleum production technology, and agricultural soil physics have much in common, yet in describing the same phenomena they often use different units, terminology, and measuring methods.

Soil physicists will find this monograph by Dr. Scheidegger very stimulating and useful. Growing out of a literature review ground in the oil industry's petroleum-development technology, specific surface in the medium which is less for soils, where bulk density is specific surface per unit of mass. Because no disadvantage, however, they are already familiar with the subject.

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SOIL CHEMICAL METHODS

The author not only brings together techniques employed in soil chemical analysis but also includes alternate procedures that were not presented before. The 498 pages of the text contain much useful information and the concise writing and organization are helpful in obtaining information. The subject matter is indicated by the following titles of chapters: Soil Sampling; Hydrogen Activity Determination for Soils; Cation Exchange Capacity of Soils; Exchangeable Metallic Cation Determination for Soils; Determination for Phosphate Determinations for Soils; Determinations for Soils and Plant Tissue Analysis—Mineral Nutrient Determinations for Soils and Plant Tissue; Cobalt Determinations; Phosphorus in Plant Tissue; Iron, Manganese, Copper, Zinc, and Molybdenum in Plant Tissue; Absorption Spectrophotometry. Details of most methods require that the reader have college chemistry, so that further study of the text's information can be obtained.

One of the distinguishing features of the book is its inclusive nature. For instance, ideas on soil sampling for field experiments can be obtained in the book. For instance, ideas on soil sampling for field experiments can be obtained in the book.