BOOK REVIEWS

THE CHEMISTRY AND MODE OF ACTION OF PLANT GROWTH SUBSTANCES


This volume is a presentation of the papers given at the Fourth International Conference on Plant Growth Substances at Wye College, University of London, from July 17 to 22, 1955. The conference was concerned with the nature of auxins and related compounds with four general topics being discussed: Natural Auxins; Chemical Structure and Biological Activity; Metabolism and Mode of Action; and Applications of Kinetics to Auxin-Induced Growth. Most of the papers were fundamental studies on the nature of some of the chemical and physiological growth responses.

The following papers are examples of some which were presented: Methods for the investigation of natural auxins and growth inhibitors by J. P. Nitsch, Harvard University; Distribution of natural hormones in germinating seeds and seedling plants by Phyllis M. Cartwright, J. T. Sykes, and R. L. Wain, Wye College, University of London; Hormones and hormone precursors in leaves, roots, and seeds by Joyce A. Bentley, S. Housley, and G. Britton, Manchester University; Chromatographic Untersuchungen über die Wuchsstoffe und Hemmstoffe der Haferkoleoptile by H. Söding and Edith Raadts, Hamburg, Germany; Indole compounds in photoinduced plants by A. J. Vlitos, Yonkers, New York; The biogenesis of natural auxins by S. A. Gordon, Lemont, Illinois; Geotropic responses in roots, Some theoretical and technical problems by P. Larsen, University of Bergen; On the effects of para-substitution in some plant growth regulators with phenyl nuclei by B. Aberg, Uppsala, Sweden; On form and function of plant growth substances by H. Veldstra, Amsterdam, Holland; The influence of growth substances upon sulfhydryl compounds by A. C. Leopold and C. A. Price, Purdue University; Salt accumulation and mode of action of auxins; A preliminary hypothesis by T. A. Bennet-Clark, King's College, University of London; The kinetics of auxin-induced growth by J. Bonner and R. J. Foster, California Institute of Technology; The kinetics of auxin-induced growth by T. A. Bennet-Clark, King's College, University of London.

There are 26 papers reported in all. While this volume may never be used as a textbook it should be invaluable as a reference for those interested in plant growth and for those working with plant growth substances.—S. C. Wiggans.

THE FUTURE OF ARID LANDS

Edited by Gilbert F. White, Washington, D. C., American Association for the Advancement of Science. 464 pp., 1956. $6.75 (AAAS members $5.75).

This book contains the papers and recommendations from the International Arid Lands Meetings in Socorro, New Mexico, April 26-May 4, 1955. These papers, written by 34 authors from 17 countries, cover the state of our present knowledge of arid lands and show the need for new research. The book is divided into five sections—The Broad View; Variability and Predictability of Water Supply; Better Use of Present Resources; Prospects for Additional Water Sources; and Better Adaptation of Plants and Animals to Arid Conditions.

Soil and crop scientists would have special interest in the following papers: History and Problems of Arid Lands; Climatology in Arid Zones; Water Resources in Arid Regions; Use of Water in Arid Lands; Geochronology and the Study of Arid Lands; Grazing Resources; Water Resources; Agricultural Use of Water under Saline Conditions; Result of Using Arid Lands Beyond Their Capabilities; Land Reclamation and Conservation in Indian America; Demineralization of Saline Waters; Salinity Factor in the Re-use of Waste Waters; Induced Precipitation; Adaptation of Plants and Animals; Better Adaptation of Plants to Arid Conditions; and Problems in the Development and Use of Arid Land Plants.

The summary of the general recommendations of the meeting are also included in the book. These papers and group recommendations point out the following guideposts for future development: A promising method for future collaboration across both national and disciplinary boundaries; specific areas of research where more work is needed; and suggested methods of thinking about future developments.

This book makes an important contribution to our knowledge of the use, misuse, and potentials of the arid land areas which account for about one-third of the world's surface. Most of these arid lands are sparsely populated. With the world's expanding population making greater demands for food production and living room, the use and potentials of the arid lands will assume increasing importance in the near future. This book would not only be of great value to anyone intimately concerned with the problem, but would also be of interest to the casual reader.