THE ORIGIN, VARIATION, IMMUNITY, AND BREEDING OF CULTIVATED PLANTS


The English translation of Vavilov's writings represents an outstanding contribution, and both K. Starr Chester and Chronica Botanica are to be complimented for making this material generally available. The accomplishments of N. I. Vavilov have long been recognized. The original book was published in 1935. The text is well documented, including numerous articles published in Russian periodicals.

Although the book is of particular interest to geneticists and plant breeders, it has a wide appeal which can be appreciated from the principle chapter headings: Phytogeographic Basis of Plant Breeding; The Law of Homologous Series in the Inheritance of Variability; Study of Immunity of Plants from Infectious Diseases; Scientific Bases of Wheat Breeding; Selected Bibliography of the Basic World Literature on Breeding and Genetics of Wheat.

The book represents a fitting tribute to a great plant scientist whose endeavors were not curtailed either by the magnitude of the problem or political dogma. His horizon was truly unlimited.

—A. A. HANSON.

MICROBIAL DECOMPOSITION OF CELLULOSE


This monograph treats of the fundamentals of cellulose chemistry, the biochemistry of cellulose degradation and prevention of decay, and the physiology, morphology, and taxonomy of cellulose-destroying organisms. The author is Research Director of the Pioneer Research Laboratories of the U. S. Army Quartermaster Corps, and he gives special emphasis to cotton textiles, but the economic aspects of the problem extend to timber and all lumber products, to tarpaulins, bags, cordage, tents, seed bed covers, to sewage and garbage disposal. Cotton fiber is the purest natural form of cellulose and its study serves here as a logical point around which a discussion of the whole program can revolve. The biochemist will find here good reviews on many chemical and enzymatic reactions, and the will find much in the cultural techniques, theories of resistance to decay, and chemical control, that will be related to his own problems. The subject of toxic inhibitors to decay is covered at length, but the modification of the molecular structure of cellulose to control decay is a field with less accomplishment, but with great theoretical possibilities. The book is extremely well documented, the number of references in the different chapters totaling over 2,500, with few repetitions, and the tables, figures, and structural formulae run into several hundred. A feature is a microorganism index.—J. T. SULLIVAN.

TRACE ELEMENTS IN PLANT PHYSIOLOGY

A Symposium organized by the International Union of Biological Sciences at the Rothamsted Experimental Station. Waltham, Mass.: The Chronica Botanica Co.; New York City; Stechert-Hafner, Inc. XVIII + 144 pages (illus.). 1950. Paper bound. $4.50.

This book published the 13 papers that were presented at the International Symposium on Trace Elements at Rothamsted in 1947. Three of the papers are concerned primarily with methods used in the diagnosis of trace element deficiencies and excesses and in techniques for growing plants in sand and solution cultures; four papers involve data and theories relative to the function of trace elements in metabolic processes; five are concerned largely with trace elements in crop production in various European countries; one book will be of particular interest to those working with trace element problems rather than to the general agronomist.—R. R. ROBINSON.

BOTANICAL NOMENCLATURE AND TAXONOMY


This issue in the Chronica Botanica series is devoted chiefly to recording detailed minutes of the Utrecht Conference, held June 14–19, 1948 and attended by a small, international group of personally invited botanists, for the purpose of discussing rules of botanical nomenclature and making recommendations to the International Congress held in Stockholm, Aug. 1951.

An official publication of the rules formulated at Stockholm is not available at this writing, but the important changes made may be found in Bulletin of the Torrey Botanical Club, Vol. 78, No. 3, May–June, 1951. An unofficial compilation of the rules prior to 1951 was published by Chronica Botanica as "International Rules of Botanical Nomenclature." compiled by Camp, Rickett and Weatherby, ($3.50) reprinted from Botanica Vol. 6, No. 1, pp. 1–120.—H. A. WAHL.

PICTURE AIDS TO GRASS IDENTIFICATION

By Herbert B. Hartwig, Marion S. Hartwig. 109 Worth St., Ithaca New York: Vol. 1, 40 pages, illus. 1930. $1.00.

This loose leaf manual contains freehand drawings of distinctive vegetative and fruit characteristics useful in identifying 18 grasses commonly grown or found in the northeastern quarter of the United States. Suggestions for using the illustrations together with a discussion of certain agronomic features of each of the grasses are included. This manual will be particularly useful as an aid in identification based on vegetative characteristics.—R. J. GARBER.

AGRICULTURAL DISCONTENT IN THE MIDDLE WEST, 1900–1939

By Theodore Saloutos and John D. Hicks. Madison, Wis.: The University of Wisconsin Press. 579 pages. 1951. $6.75.

Agricultural Discontent in the Middle West 1900–1939 is a report of the state of mind existing among farmers in this area of the United States. Farmers and their organizations here have long been sensitive to the activities of various groups and interests which sought to impose their own economic and governmental pattern upon the North Central States. And being sensitive, agrarian people have been quick to respond. Sometimes it is with the "hit-out-in-all-direction" milk strike. Sometimes it is by the direct method of voting out the Congressman intent on giving concessions to a special interest group.

Saloutos and Hicks describe this state of mind in detail and in interesting fashion. They cover the unrest and political activity for which the Middle West has long been noted. The book will be enjoyed particularly by those persons who have grown up on farms and who are familiar with the areas of conflict, and at the same time agreement, between farm people and those groups with whom they must do business. It will also be of great value to the county agent and other people who must take the views and ideas of farm people into account in their educational programs.

Research workers in crops and soils are somewhat further removed from the economic problems with which farmers must deal. Nevertheless, the new varieties from the experiment station and the new treatments for the soil have no value until they fit into this economic picture. Accordingly, it is well that the laboratory worker have some knowledge of the area in which his findings are destined to be used. Saloutos and Hicks have provided such information in authentic and readable form.