THE UNDERGROUND ORGANS OF HERBAGE GRASSES


This book is an excellent survey of studies pertaining to the roots, rhizomes and other underground organs of herbage grasses. Work is cited on a wide variety of grasses used for forage and information on a number of the more important weedy grasses is also included. A description of the morphology, anatomy, life history and chemical composition of the underground organs is given. Information is also given on the effects of environmental factors and farming practices on the growth of the underground parts. Particular emphasis is placed on the relationship between the underground organs and growth of herbage. A comprehensive bibliography of nearly 500 references is given.

Material assembled in this book is not readily available in any other single publication. The book will be a distinct aid to workers in the fields of pastures and forage management, ecology, weed control and general agronomy. Workers in related fields will also find the book a convenient source for information that is otherwise widely scattered.—K. P. Buchholtz.

IRRIGATION RESEARCH IN THE UNITED STATES AND CANADA

By Committee on Sprinkler Irrigation Research, American Society of Agricultural Engineers, 420 Main Street, St. Joseph, Michigan. 102 pp. 1957. $1.50 (postpaid).

A method for setting up channels of communication between research workers is to have available a reference that contains a listing of irrigation projects being carried out in 1955 by research groups in the various states and provinces. Communication can result in better designed research studies, improved instrumentation, higher quality data and reduced duplication of effort.

The committee has presented in a concise compilation the following information on listed research projects:

- Project title, cooperating departments and agencies, project leaders, location, brief description, objectives and publications.
- Since the response to the committee questionnaire was approximately 95%, this report should be a valuable reference.

THE CLIMATE NEAR THE GROUND


"The Climate Near the Ground", originally published in German, and now translated into English, is a comprehensive survey of microclimatological problems. It covers many of the microclimatic problems of practical consequence in a descriptive method of presentation. At the present time it practically stands alone in its field.

The book can be divided into two broad divisions. The first covers the basic meteorological physics of the air layer near the ground and also certain soil properties. Radiation, wind, and humidity are among the items discussed. Material is presented with a minimum of mathematics. The second covers the microclimatic effects in relation to topography, plant cover, and man. The significance of microclimatology to zoology is discussed very briefly. To some readers, the second division may seem somewhat lacking in physical explanations. The book is written so that the reader needs little mathematics or physics.

This book is of great interest to specialists in the field of microclimatology, and would be of considerable value to specialists in many other fields, such as agriculture, botany and forestry. It is particularly recommended for those with an interest in microclimatological problems, but with a limited knowledge of mathematics and physics.—R. H. Shaw.

PLANT PATHOLOGY

Second Edition


A widely used standard text and reference book in plant pathology has been brought up to date in this second edition. (First edition published in 1950.) Dr. John C. Walker is Plant Pathologist at the University of Wisconsin.

Symptoms, causal factors, and cycles of over 100 representative diseases including all the major types of the chief agricultural crops and forest trees are discussed.

The basic principles of plant pathology, definition of terms, classification of diseases, history of plant pathology, environmental relations, host-parasite interactions, disease resistance and various types of remedial measures are presented in a straightforward and simple manner. The second edition has brought all sections up to date and fully explains virus diseases, their transmission, modern concepts of their development and other aspects.

Plant Pathology is adapted for use by the layman and pathologist alike.

VIRUS DISEASES OF BRASSICA CROPS

By L. Broadbent. Cambridge University Press, 32 East 57th Street, New York 22. 94 pp. 1957. $3.00.

In many countries the brassica crops cauliflower and broccoli have recently suffered serious losses from virus diseases. This book reports work done in England in an attempt to cope with the diseases. The intensive study was initiated as a result of crop failures in 1948-1950 and concentrated on the conditions leading to serious outbreaks of field crops. Work was done at Rothamsted, Agricultural Colleges and growers farms.

Introductory chapters discuss the place of brassica crops in England and Wales and the history of the virus disease in Britain. Following chapters discuss cauliflower mosaic, cabbage black ring spot, turnip yellow mosaic, turnip crinkle and cucumber mosaic.

Two-thirds of the book deals with cauliflower mosaic and cabbage black ring spot.

Every phase of these two diseases including properties of the virus, plant reaction, aphids and their association, seeded incidence, spread into and within the crop and control measures is discussed. Other virus diseases are discussed to a lesser degree.

Dr. Broadbent reports previous work in the field as well as his own recent investigations.

This book will be exceedingly valuable to agronomists, horticulturists, growers and gardeners in this country and abroad where the brassica crops are often used for stock feeding. Plant pathologists working with other viruses will find the book useful in their studies.

ERRATUM—The article, "Inheritance of Resistance to Phytophthora Root and Stem Rot in the Soybean", by R. L. Bernard, P. E. Smith, M. J. Kaufmann and A. F. Schmitthenner was inadvertently omitted from the notes section of the table of contents of the July, 1957, Agronomy Journal (volume 49, front cover).