The advances in cartographic techniques are presented in a section on choice of base maps, a greatly improved and expanded section on the use of aerial photographs in soil surveys, and an appendix on map compilation and reproduction. In view of the present widespread use of aerial photographs as base maps in the United States, the discussions on map preparation with the plane table and by compass traverses have been placed in the appendixes.

The discussions of the uses of soil surveys, the new sections on yield predictions and soil management practices, and soil groupings on the maps reflect the greatly increased use of soil surveys in the United States today. The relationship of soil surveys to other fields of agricultural research and their utility in getting the results of these researches back to the areas where they are applicable are very ably presented in the section on soil survey reports.

The excellent, short, general bibliography has been revised. A special bibliography of representative soil surveys from contrasting regions of the United States and some sample descriptions of soil series are helpful additions to the text.

This book is the soil surveyor's bible in the United States. The Soil Survey Manual should be on the reference shelf of every agronomist and soil scientist.—E. P. Whiteside.

GENETICS IN THE 20TH CENTURY


This book comprises 26 authoritative essays presented as invitation papers at the Golden Jubilee of Genetics at Ohio State University, Columbus, Ohio, September 11-14, 1950. For those geneticists and breeders who attended the meeting the book will serve as a permanent record of an inspiring meeting, for those who did not attend, it will be prized not only for its historical value, but because it surveys the progress that has been made in genetics and portrays the status of some of its current problems. The 26 essays cover a wide range of topics and impress one with the impact of genetics not only on biology, but on the gamut of human thought. There may be some who may wish that applied genetics could have been treated more adequately, but all will agree that this is a volume that should be read not only by biologists, but by anyone desiring a better understanding of the possible role of biology in solving present day problems.—R. J. Garber.

THE MOLDS AND MAN

By Clyde M. Christensen. Minneapolis, Minn.: University of Minnesota Press. 244 pages (illus.). 1951. $4.00.

There are but a few scientific books that provoke unsolicited comments. Such action is usually induced by the reviewer's indignation against a blundering author, rightful or otherwise; very rarely, as in this case, through an admiration of a writer's achievement.

The aim of the book is to give a general account of fungi and their impact upon us. In the introduction, the author gives an assurance that to him "the study of fungi has been more than just a professional occupation—it has been an absorbing, enriching, stimulating adventure." This statement, practically equivalent to a declaration of affection for fungi, is likely to be taken with a grain of salt by many of us who had less enthusiastic teachers of plant pathology. For how can anyone become infatuated with a creature like Puccinia graminis, whose reproductive mechanics are complicated by pycnospores, aciospores, urediospores, teliospores, basidiospores, and other boresome details. Yet, after reading Christensen's account of the molds' sex life, the reader is inclined to agree with the author that fungi "have evolved some rather clever and effective variants of the standard boy-meets-girl theme" (p. 30).

As the pages are turned, the reader's attitude may undergo further changes, and his initial reaction of disgust and aversion, say, to the stinkhorn, is gradually replaced by a sense of respect for this "one of God's ill-smelling wonders" (p. 41).

The account of the fungi partnership with other organisms, plants, or animals, not only is enlightening, but leads the reader to contemplate upon the mystery of the universe. Aside from the fascinating description of the facts of symbiosis, Christensen's philosophical outlook is most intriguing. The knowledge of organisms, which as a team have assured themselves a variety of places in the sun, as well as in the shade, leads the author to conclude that in the plant and animal world "a rugged individualist is just a theoretical abstraction" (p. 49). In contrast to H. G. Wells, unfamiliar with mycorrhizae, Christensen presents an awe-inspiring picture of the world to come, a world taken over by fungi, succulent, watery growths of giant mushrooms. In his opinion: "Thus would biological truth be given to the Biblical contention that the meek shall inherit the earth. . . . There is a good possibility that in the twilight of this world the forms of life predominating will be the fungi and the meek" (p. 61).

Aside from abstract contemplations, the reader may get the benefit of a philosophy that is much closer to his home and pocketbook. The tremendous losses caused by fungi in stored grain may serve as one example.

Of greatest interest to practicing foresters should be Christensen's viewpoint on the biological methods of parasite control. At regular intervals, this 120-year old idea is pushed to the foreground as a possible means of extermination of undesirable organisms, human included. In Christensen's opinion "as the problem has been gone into more thoroughly from various angles, the early hopes of easy control by this means have been greatly modified. Or, if you like it bluntly, most of such attempts have been partial or complicated failures." After considering the meager results obtained by biological control with insects, i.e., organisms totally unprotected by public health services, sanitation corps, or quarantines, Christensen believes that "neither, however, is there a biological basis for the type of hysteria that the idea of biological warfare of germ warfare has been greeted with in some sections" (p. 166).

The dim outlook on the possibility that some microbes will take over our job of parasite control should not diminish the interest in the death struggle of living creatures for the maintenance of natural balance. The most astonishing illustration of this struggle is probably provided by the predatory fungi equipped with constricting snare for trapping nematodes, slippery and elusive animals which are hundreds of times the size of the molds that trap them. The Molds and Man is one of the "must" books for all agriculturists and soil scientists who are willing to avail themselves of the rare opportunity to increase their knowledge of the life surrounding them, and, at the same time, have pleasure in so doing.—S. A. Wilde.

GENERAL HORTICULTURE


The author is head of the Department of Horticulture at Ontario Agricultural College. General Horticulture surveys the scope and value of the entire horticultural industry in the opening chapters. Then the basic fundamentals of botany, soils and chemistry are discussed. A large part of the book is devoted to practical information on handling horticultural plants, including methods of disease and insect control. Landscape gardening and design are included in the final chapter.

This book will be of value to the gardener or truck farmer as well as to students in their first course in horticulture.

AGRICULTURAL MARKETING


The author, now serving as a marketing consultant, has been director of the Marketing Research Branch, Production and Marketing Administration; head of division of Marketing and Transportation Research, Bureau of Agricultural Economics; and professor of agricultural economics at the University of Missouri. The first section of the book is devoted to description of consumers of farm products and of production factors which affect marketing. The second section covers various marketing systems. Section three deals with prices and marketing margins. Transportation, market information, and other services are discussed in the fourth section. The last two sections deal with potential improvements in our marketing system and means of introducing these improvements into the present system.

While this book is interesting, informative and easy to read, its greatest use will probably be as a text for beginning agricultural marketing students.