Book Reviews


The review of this new book which appeared in the July-August issue showed the wrong date of publication. We hope that any one who observed that date will note this correction.


Crop ecologists and many agronomists will find this book a desirable text or reference source. The book is derived from a course entitled “Crop Adaptation” taught by the author at Iowa State University. The undersigned reviewers, who completed the course under Dr. White, heartily endorse the book as a much-needed text in the field of crop ecology or adaptation.

The subject matter is well organized, easily followed and readily understood. Part I deals with general principles and concepts (e.g., plant distribution and limiting factors, adaptation and natural selection, the genotype concept and the origin of cultivated plants). Part II treats climatic classification and the major environmental, physiographic, edaphic, and biotic factors. Discussion of biotic factors, such as, is somewhat brief, particularly the effect of insects and diseases on plant distribution. Part III is entitled “Crop Distribution and a Climatic Basis”. Representative crops of the tropics, subtropics, and the intermediate climates are discussed. The concept of “ecological optimum” is well covered.

This book will find use not only as a text in the crop ecology course, but also as a valuable reference for plant breeders and other plant scientists.—D. W. Beatty, South Dakota State College; D. E. Gilbert, Ohio State University; and F. C. Stickler, Kansas State University.


As the title implies, this is a listing of publications in agricultural meteorology, including textbooks and earlier bibliographies. Chapters 2 to 5 deal primarily with plants in terms of the physical factors affecting plant growth and development; chapter 6 is on radiation, 3 on temperature, 4 on moisture, and 5 on related factors. Chapters 6, 7, and 8 cover microclimate, observation and instrumentation primarily from the plant standpoint but with some animal applications. The emphasis is shifted to animals in chapters 9 and 10, plant pests in chapter 9 and livestock and domestic fowl in chapter 10. Chapters 11 and 12, on phenology and environmental control, cover both crops and animals. Chapter 13 covers agrometeorological forecasting.

With this range of subject matter wide coverage of the literature has been accomplished. It should help the investigator in the field of much tedious labor and library search.

The book is highly recommended for specialists in agricultural meteorology, as well as those working in areas which are related to this field.—ROBERT H. SHAW, Iowa State University.


This volume is one in the World Crops series dealing with individual crops or groups of crops of world importance. It is concerned with the cultivation, utilization, production problems and identity of the large fungi that are used as foods in various countries.

Chapter I contains a brief introduction to the fungi, particularly to the special terminology and life cycle of the groups containing the mushrooms and the truffles. Two chapters are devoted to the cultivated white mushroom and other cultivated species of Agaricus; one chapter each to the padi straw mushroom, the shiitake, and to truffles. Taxonomy, normal range and habitat of each fungus are discussed briefly. Special problems of cultivation and techniques of cropping, and marketing are treated in detail. Following these is a chapter devoted to a discussion of species of edible fungi that are not utilized commercially at the present time. Two chapters are included on diseases of mushrooms and truffles and on 'weird' fungi that compete with commercial species in present cultivation systems. One chapter deals with animal pests and their control. The final chapter is a discussion of food value of the fungi, their use as animal feed and other miscellaneous purposes.

The book is well illustrated, and brings together in an interesting compilation much information about the edible fungi. It should prove to be a valuable reference source for anyone interested in these organisms.—L. H. TIFFANY, Iowa State University.


Since the beginnings of agriculture, weeds have plagued the farmer. In recent years their control has received increased attention, especially since the discovery of 2,4-D. However, considering the magnitude of the losses caused by weeds still greater research efforts on weeds as their control are warranted. This textbook outlines and discusses weed control methods with special emphasis on herbicides and their use. It should stimulate further the growing interest in weed control.

In the first two chapters of this book the magnitude and complexity of weed problems are outlined and methods are introduced. Chapters 3 to 7 are concerned with general aspects of herbicide selectivity, activity, formulation, and methods of application. Chapters 8 to 14 review the characteristics and properties of specific herbicides now being used or showing promise of usefulness. Methods of weed control used or weed situations are described in chapters 15 to 24. A useful appendix contains information on the susceptibility of most of the common weeds to 2,4-D, 2,4,5-T, and silvex. Helpful tables on herbicide terminology, weights and measures, spray nozzles and rate of application are included, also.

Due to the great diversity of subject matter now covered by the discipline of weed control it is difficult to include all aspects in detail. For example, the brief coverage of wild oats and its control will be a disappointment to those of West Central Canada and the extreme North Central part of the United States where this weed is the most serious annual grass. The importance of regulatory aspects such as the weed and seed laws, and herbicide residue legislation would appear to warrant more attention, also.

This book is designed as a textbook in weed control. It should be of considerable value for class use, especially when emphasis is on herbicides and their usage. It seems certain that it will come into wide use as a text for weed control courses.—RICHARD BEREHS, University of Minnesota.


The authors state that this book has been written as a textbook for a one-semester introductory course in probability and statistics. They indicate that a mathematical knowledge equivalent to two years of high school algebra is required as background. To avoid the mathematical difficulties associated with limiting processes, discussions have been restricted wherever possible, to the finite case, in particular all populations are assumed to be finite.

Chapter 1 contains a brief discussion on the history of statistics and is followed by chapters on organization of data, summation notation, analysis of data and elementary probability. These discussions are followed by chapters on the binomial and normal distributions, random sampling, testing hypotheses (large and small samples), the sign test, regression and correlation, chi-square distribution, index numbers, time series, F distribution and one-criterion analysis of variance.

The book is well written and illustrated with many problems and examples which are drawn from many fields. Possibly the major fault of this text is the lack of emphasis on statistical inference. The almost complete use of the finite case is unrealistic for students in biology. The reviewer feels that a one-semester course for undergraduates should stress statistical inference and the concept of sampling from an infinite population rather than limiting the discussion primarily to large sample theory. The reviewer also believes that a student should have calculus background before taking a course in elementary statistical theory and probability. I do not think this book is basic for students in Agronomy or as a reference for research workers.—JAMES H. TORRIE, Professor of Agronomy, University of Wisconsin.