GENETIC RESEARCH. By Arne Münzing. Lts Förlag, Stockholm, Sweden. 1961. 345 pp. $7.00 postpaid.

There has long been a need for an excellent elementary genetics text in English which is comprehensive in its treatment of the different facets of genetics yet is written from the viewpoints of both the basic geneticist and the breeder. This book, which the author has revised and translated from the Swedish text, fills that need.

Although this book has all the desirable elements of an introductory text, sacrifice of the more advanced genetic concepts for the sake of simplicity has not been made. Recent investigations and recently accepted ideas are adequately treated so that even to the worker in genetics it affords a stimulating summary of modern genetic knowledge.

One characteristic which adds greatly to the readability and ease in presentation is the happy neglect of the myriad "workers in the vineyard" during the discussion of the advances made in the science. As much as this contributes to the clarity of the book this is not always an advantage to the serious student who may be tantalized with a choice tidbit of information without a clue as to where his aroused curiosity might be satisfied. This need has been met to a degree by the inclusion of a complete up-to-date listing of reference books and world periodicals dealing with genetic researches.

Following a short historical introduction he proceeds from a discussion of the substance of heredity and nuclear division to that of the reduction division in sex cell formation and then to alternation of generations, so that in later chapters explanations of the mechanisms of genetics develop naturally in relation to chromosome behavior. The inclusion of three chapters, not in the original Swedish edition, dealing with the newer researches in physiological and biochemical genetics, the genetics of bacteria, and the nature of the gene extends the scope of treatment so that all the various genetic fields are adequately but briefly covered. His discussion of mutations both spontaneous and induced is extremely apropos. The last three chapters touch briefly upon applications in the field of plant and animal breeding and also the relationship of genetics to man himself.

This book would serve as an excellent elementary text for introducing students from any discipline to the science of genetics.

—JAMES G. ROSS, South Dakota State University.


This textbook on soil science should prove of value to French-reading college-level students of soils, as well as to teachers and research workers. The author is Professor at the Ecole Nationale des Eaux et Forêts, at Nancy, France. This book represents a thorough revision of an earlier work published in 1956.

The first of the three major sections of the book deals with soil properties and considers both the older views and the newer concepts in soil characteristics. Soil constituents, soil physical aspects, soil-water relationships, cation and anion exchange, essential nutrients, organic matter and the nitrogen cycle, and soil micro-biology, are some of the topics covered in this section. Each chapter of theoretical discussion is followed by a section on practical aspects and applications. However, the practical aspects are discussed mostly in general, rather than in specific, quantitative terms.

The second section deals with soil formation and classification. The physico-chemical processes involved in soil formation, as well as the effects of climate, parent material, topography, vegetation and Man, are discussed. The soil classification scheme followed is not one that most U.S. pedologists would adopt, but one that some Europeans favor. A chapter, subdivided into a number of appropriate sections, is devoted to each of the following: calcimorphic soils, mull soils, raw humus soils, hydromorphic soils, warm-climate ferruginous soils, ferrallitic soils, halomorphs soils, and poorly-evolved soils.

The third section covers selected topics of applied soil science: soil erosion and conservation, soil improvement and fertilization, soil cartography, and field and laboratory methods of soil study. In connection with the latter, detailed laboratory procedures from the literature are presented for physical and chemical soil analysis.

The ambitious scope of this book has forced the author to cover some topics in less detail than others. However, a condensed, clear, and sometimes even schematic language style has allowed the presentation of a considerable number of concepts and ideas in a minimum of space, resulting in a generally comprehensive, up-to-date text. Illustrations and graphs are well-chosen; in particular, the schematic profile diagrams and block diagrams of soils discussed in the second edition are clear and present much information in little space. The black-and-white and especially the color photographs of soils are excellent. A comprehensive list of references drawn from the world literature will be helpful to the reader.

—HENRY A. FRIBOURG, University of Tennessee.


This book appears destined to become a standard reference in its field for many years to come. The volume is a compilation of papers presented at the 4th International Conference on Plant Growth Regulation held at Yonkers, New York, in August 1959. It is a more comprehensive volume than the two preceding compilations in this field, "Plant Growth Substances," which was a record of the 2nd Plant Growth Conference held in 1949, and "The Chemistry and Mode of Action of Plant Growth Substances" which includes the papers presented at a conference held at Wye College, England, in 1955.

The present volume includes papers on various aspects of plant growth regulation by 105 authorities from throughout the world. The subjects covered are the naturally occurring plant growth substances, the mechanisms of auxin activation and inactivation, the synthetic growth regulants, the gibberellins, other plant growth regulators, and the improvement of growth regulator formulation. A selected bibliography is included with each paper. Charts and tables are numerous and enhance the value of the book.