This text portrays the comprehensive body of theory and practice which constitutes the science of plant breeding at a level within the intellectual grasp of most serious undergraduate students. The author has broken with precedent by excluding the usual introductory or survey chapters on elementary genetics, biometry, and experimental design. This has allowed sufficient space to introduce basic ideas involved in quantitative and population genetics, genotype-environmental relationships, and mating systems.

He, furthermore, adopted an organization which emphasizes the genetic bases of breeding self- and cross-fertilized plants, without treating the various crop species individually. This departure avoids a certain amount of duplication permitting an amplification of concepts and methods unusual in a beginning text.

These changes have led some readers to conclude that the book is too advanced for the average undergraduate in agriculture. Thirty of the 36 chapters are clearly written for the undergraduate student. The author is careful to present in the introduction to new subjects an appropriate historical and developmental background. The principle of introducing new concepts and definitions in simplified form, followed at some later stage by a more rigorous statement, has been rather consistently applied. Important ideas are clearly enunciated. The examples from breeding experience used in illustration of the many theoretical and practical points seemed to the reviewer to have been particularly well chosen. A special effort has been made to present balanced viewpoints, and to note the frequent variations and exceptions to present rules. There is no attempt made to suggest that plant breeding is simpler than it is actually nor to reduce it to a handful of routine operational details.

The author carefully points out that six chapters were included primarily as a challenge to the exceptional undergraduate in developing insight into important concepts in selection theory; they seem to more nearly meet the needs of beginning graduate students.

The text contains a modest number of pertinent photographs which are nearly always good reproductions. Liberal and effective use has been made of tables and figures that are excellent in design and reproduction. Selected references at the ends of chapters, a useful 8-page glossary, and a detailed index complete the text.

The minor printing errors are quite insignificant in view of the general excellence of the book.—M. W. Adams, Michigan State University, E. Lansing.


Through a careful selection of superb photographs and their combination with an illuminating text, the authors have achieved a goal for which many others have strived. The book is built around the concept of the forest as a community of living things whose lives are inextricably intertwined with one another and bound to their physical environment. The 190 photographs and illustrations, 81 in color, and includes chapters on the Forest Year, Ancient Landscapes, Tree Engineering, The Web of Forest Life, The Hidden World of the Soil, Rise and Fall of the Wilderness, and Forests of the Future. The appendix includes a bibliography, statistics on some record trees, and a key to tree recognition.

This book reveals new knowledge of chemical genetics. It is well written. It is as complete in its defined area as any book of its size could be. It can be read by anyone who has a general background in biology and chemistry. It is particularly good reading for people whose knowledge of genetics is mainly classical; here in a single volume is the whole field of modern chemical genetics. Even if one didn't already know, it would be clear that the authors are deeply immersed in the research themselves; their depth of insight, their awareness of current problems, and the excitement of new and rapid discovery permeate the entire volume.

I found the book most exciting reading. Anyone who tried to buy a copy from the publisher in the weeks shortly after publication can testify to its popularity.—James F. Crow, Medical Genetics Department, University of Wisconsin.