
The author states in the preface that the book "... grew out of an interest in the application of cytogenetics to the theory and methodology of plant breeding". The correlation of the extensive information available in these fields was a much-needed and worthwhile endeavor. A title embracing this thought rather than that employed would seem to have been more appropriate. The first six chapters of the book are devoted to the development of cytogenetics in relation to plant breeding. The next six chapters consider such phases as plant introduction, breeding and testing methodologies, and varietal release. The final chapter is devoted to the organization of plant improvement work in the United States, Canada, and certain European countries to illustrate the different procedures employed.

Generally, the book is clearly illustrated with well-chosen photographs and line diagrams. The organization of chapters is methodical and well-presented, although they may be somewhat overly speculative in certain sections. Extensive useful literature lists accompany each chapter. The author indicated in the preface that these might be more extensive than needed for the undergraduate, and that they might be more useful to the advanced student and professional plant breeder. Mechanical errors in printing, etc., appear to be minimal.

It is unfortunate that certain looseness of expression and technical inaccuracies occur. These materially lessen the effectiveness and usefulness of the book, particularly for the beginning student. Similarly, while reference lists accompany each chapter, certain pertinent omissions have resulted. For example, reference to the Japanese work on embryo transplants would probably have resulted in a somewhat different type of discussion concerning this technique. The topic of chromosome substitution has been treated in some detail. No reference was made to the Japanese work of either chromosome or genome substitution. The section dealing with polyploid breeding relates in some detail the Japanese work on triploid sugar beets. Conversely, similar European work is but briefly mentioned even though recent estimates indicate that as much as three-fourths of their acreage is devoted to triploid varieties or strains. An excellent author index is included, but the text is not well-indexed with regard to subject matter. Expansion of the latter would have resulted in increased usefulness, particularly for beginning students. It is hoped that these discrepancies will be rectified in future editions of this otherwise very useful text.

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Although there are several textbooks already available in this field, it appears that this new book will be a worthy addition. The book is not greatly advanced and will be excellent for beginning college courses, high school reference, and fruit, vegetable, and flower grower alike. It is more than a "how to do" book in that it goes into the "whys" of many of the horticulture practices and procedures. It is excellent in the basic knowledge in soils, fertilizer, propagation and growing structures.

Introductory horticulture has been relegated to increasing the basic knowledge of the horticulture plant and its environment including soil, climate and structure. Eight chapters deal with specific fruits, flowers and vegetables and their production. Other chapters cover the home landscape, nursery and arboriculture, storage and marketing and horticultural shows and judging. The chapter on plant growing problems, abnormalities and pest control will probably be one of the most useful chapters. However, it is not detailed in specific control measures.

This book will be especially helpful to the horticulture student and anyone interested in growing flowers, vegetables or fruit. It probably will be most useful to those just starting in the business.

PESTICIDE HANDBOOK. Edited by Donald E. H. Frear, College Science Publishers, P.O. Box 798, State College, Pa. 220 pages. 1958, $1.50 (paper bound) and $3.00 (cloth bound).

This tenth edition lists 6,128 commercially produced insecticides, fungicides, herbicides, rodenticides, soil conditioners, and equipment items. The book was originally produced under the auspices of the Maine and Pennsylvania Agricultural Experiment Stations and the Northeast Agricultural Experiment Stations. At present it is edited by D. E. H. Frear of Pennsylvania State University.

An alphabetical listing of all trade names with information on ingredients, uses, and manufacturers comprise the greater part of this annual publication. Adjuvants, including wetting and spreading agents, diluents, repellents, plant hormones, and application machinery have been included.

Although this book gives general information about the use of farm chemicals, including compatibility, hazards, and tolerances of the common pesticides, it does not give specific rates of application or recommend use with specific pests or weeds.

For anyone interested in the availability of almost any chemical for use on the farm, this book would be invaluable. Section I of the book lists all trade names of chemicals arranged in alphabetical order without regard for type of product. In Section II all products are listed according to use, such as fungicides, insecticides, herbicides, etc., with further breakdown according to active ingredients. In Section III the names of all manufacturers are arranged in alphabetical order followed by reference numbers of the product manufactured by each of them. The three sections are then cross referenced for easier use of the information. This book should be especially helpful to county agents, vocational agricultural instructors, farm managers, farm leaders, and those farmers using farm chemicals extensively.—G. W. Wengert.

MENTION


This booklet contains the inaugural lecture of the author as Draper Professor of Agriculture in the University of Cambridge. From his experience in tropical agriculture, mainly in Africa, he draws examples to illustrate "two fundamental propositions in the application of genetics to crop-plant improvement: the management of variability and the definition of objectives." He gives reference to 25 other published works from almost as many authors.


Diseases caused by a wide variety of organisms carried on crop seeds are described by four authors, including Alire M. Andersen who wrote 9 of the 13 sections in the booklet. The crops involved are corn, wheat, barley, rye, oats, beans, peas, sorghum, cabbage, radish, bluegrass, flax and small-seeded legumes. Descriptions of the causative organisms and the infected seedlings are given and methods of control are suggested in each case.


Contains information of great value to the grower, dealer, shipper, or canner of tomatoes, as well as to the research specialist or anyone interested in the tomato industry. There are complete and up-to-date lists of references to associations, periodicals, booklets, research reports, and individuals doing research in tomato culture or processing. Data on 1957 acreage, yield, and canning pack are included.