

Books and Articles

Reviews

**PRINCIPLES OF FIELD CROP PRODUCTION**


This is very much the best general crops text now on the market. The first 330 pages are given over to general chapters, including Crop Production, Crops and Environment, Botany of Crops, Crop Improvement, Tillage, Fertilizers and Rotations, Seeds and Seeding, Harvesting, Market Grain and Hay, Pastures, and Weeds. (The titles are abbreviated.) Beyond that, the individual crops are discussed in three sections devoted, respectively, to crops of the grass family, of the legume family, and of other families. This botanical classification will be a distinct handicap in some agronomy courses, which are based on use rather than botanical classification.

It is a fundamental difficulty of crops courses and, so, of crops texts, that much of the material is, of necessity, local. A good Hereford steer in Arizona is still a good Hereford steer in New York, but good methods of handling alfalfa in the two regions are only slightly related. Crops and cultural methods change within short distances. No general crops text can hope to include everything important about every region. The author must choose what he will cover, and no two men will make the same choice.

These authors have chosen to discuss every field crop grown in the United States, from corn and alfalfa to guayule and perilla. A more comprehensive coverage is not possible. Its comprehensiveness as to crops necessarily means that coverage of the crops is general and that many details about each crop are omitted, despite the nearly 1200 pages.

Its coverage of grain crops is all that could be asked in so comprehensive a text. The forage crops teacher may be disappointed. In the first 330 general pages, less than 70 relate to forage crops. The chapter on Seeds and Seeding does not mention the many problems of forage seedings except for hard seeds. Of the individual crops, about 50 pages of the “grasses” section, 140 pages of the “legumes” section and 30 pages of the “other families” are devoted to forage crops—a total of about one fourth of the text. The most serious lack is in its coverage of perennial grasses. All perennial grasses, crops essential to soil conservation, grown on tens of millions of acres and on nearly every farm in the country, are covered in 36 pages. Sixteen pages are allotted to sugar cane, grown on less than 500,000 acres in continental U. S.; 15 pages to millets, grown on less than 100,000 acres.

Previous general crops texts have had little or no material applicable west of the 100th meridian; this one covers that area in excellent fashion, somewhat at the expense of the Corn Belt. The crops teacher in the Corn Belt and East will need to use considerably more supplementary material with this text than one working west of the Missouri River.

The specific recommendations which the authors make are careful and accurate. Naturally, there are items which will probably be changed in revisions, but these are far fewer than in most texts, to say nothing of most first editions.

The accuracy of their citations is a joy. The authors and publishers have combined to do an exceptional job of proof-reading. It is practically perfect. There are over 300 figures in the book, all clear and well reproduced, and the great majority of real teaching value.

The appendix contains a valuable innovation in crops texts: a table of the composition of plants and plant products. The table of “Seeding; Seed and Plant Characteristics” is one of the most comprehensive ever brought together, and should be valuable to many. The “glossary” of 20 pages should be a great help to both students and teachers. A set of conversion tables will surely be frequently consulted.

It will be long before a better general crops text is produced.—C. J. Willard.

**INTRODUCTORY BOTANY**

By Alexander Nelson. Waltham, Massachusetts: Chronica Botanica Co. 479 pages, illus. 1949. $3.75.

This book is intended for use as a text in an introductory course in Botany at the college level. The author undertakes to provide the student with a general background of botanical knowledge rather than to give him numerous botanical applications. The subject matter is presented in three sections: (1) morphology, anatomy, and classification, (2) gymnosperms and non-flowering plants, and (3) physiology, plant distribution, and genetics. One hundred twenty-one figures and an index are included in the book. It will be of primary interest to teachers of elementary Botany.—R. J. Garber.

**Mention**

**SOIL-ROOT RELATIONSHIPS OF CERTAIN NATIVE GRASSES IN VARIOUS SOIL TYPES**


A study of the distribution of root systems of 10 species of prairie grasses in 16 soil types based on 33 monoliths, each 1134 inches wide, 3 inches thick, and from 3 to 5 feet long: Six tables and 31 illustrations are used to supplement the text.