

Silvicultural terminology is confused where the term "selective logging" is used as a synonym for the selection system of cutting.

Chapter XII, "Productivity of Forest Soil and Forest Management," is an elementary treatise on what is commonly known as forest regulation and valuation. This information can be found in any textbook on forest management. Entirely lacking is the wealth of information available in the American literature on the relationship between soil properties and site index, rate of growth, and the composition of forest stands.

The last five chapters are concerned with forest nursery soil management. The management practices outlined are particularly adapted to the Lake States region, where they were in the main developed.

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Forest soils. Harold J. Lutz and Robert F. Chandler, Jr. New York: John Wiley; London: Chapman & Hall, 1946. Pp. xi + 514. (Illustrated.) \$5.25.

This book is a very welcome addition to the literature in a relatively new field of applied science in this country. Prior to 1946, material on forest soils was available only in journal articles and foreign language works. American and English texts on soil science are usually written for either the agricultural student or the pedologist (one who studies the soil and its development as a natural phenomenon without regard to its usage). The reader has only to compare the subject matter listed in the indexes of these books with that given in *Forest soils* to appreciate the inadequacy of the former works for foresters.

The thoroughness of coverage is shown by the chapter headings, which include: soil-forming minerals; soil-forming rocks; disintegration and decomposition of minerals and rocks; forest-soil organisms; the organic matter of forest soils; nature and properties of soil colloids; general physical properties of forest soils; the water relations of soils, particularly forest soils; general chemical properties of forest soils; soil formation; forest-soil classification; soil erosion and forest-soil deterioration.

The fundamentals of soil science are stressed, and much of the material is presented in considerable detail with no attempt to simplify for the reader who is not fortified with a scientific background. The treatment of the basic structure of minerals and the mechanics of base exchange, to cite two examples, will be much too technical for many readers. Students in a one-semester course who have not had adequate courses in geology and chemistry will find such portions of the text rather heavy going.

On the other hand, it is a decided advantage to have a book which contains these fundamentals of soil science as they relate to the particular subject—forestry. Recourse to other soils texts will not be necessary unless the student is specializing in a particular phase of the subject. This book will serve as an excellent reference work, and instructors of general soils courses will find it very useful because it approaches the subject from a somewhat different angle than is customary in soils texts.

In one rather specialized branch of the subject—nursery soils—treatment is much too brief to be of use to managers of

forest nurseries. The authors undoubtedly preferred to leave that field to others.

Literature citations, which are abundant, are given at the end of each chapter. The text is illustrated with about 33 half tones and numerous well-chosen charts. Several minor changes, such as inclusion of a more up-to-date soil textural class chart than that shown on page 232, and the words "dissolved matter" in the title of Table 5 on page 72, will undoubtedly be made in subsequent editions.

The authors are to be congratulated on the production of this excellent volume, which will take its place along side older, well-known works of European investigators.

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General horticulture. Thomas J. Talbert. Philadelphia: Lea & Febiger, 1946. Pp. 452. (Illustrated.) \$4.00.

This book serves producers of horticultural crops and vocational and undergraduate students in schools and colleges with general information on the production and handling practices for a wide range of horticultural crops. It serves primarily the interests of students and growers of tree fruits, small fruits, and nuts in temperate climates. An over-all picture of the entire horticultural industry in the United States is given to show the production areas and relative importance of fruits, nuts, vegetables, flowers, ornamental plantings, and forestry. The reader is also introduced to the more important subtropical and tropical fruits, with pertinent comments on their cultural requirements. The last chapter gives a broad introduction to the practices involved in harvesting, handling, and distributing horticultural crops.

The printed pages are interestingly broken with 129 unusually clear illustrations which have been selected with painstaking care by the author to emphasize important practices and objectives. Most of these engravings are "close-ups," particularly as they are used to illustrate insects and diseases, their injuries, and single-step procedures used in planting, budding, grafting, pruning, and training.

At the close of each of the 21 chapters, selected references of books, bulletins, circulars, and scientific papers are listed to enable the student to give additional time to the study of specific areas in line with his interests.

Separate chapters are given to some fruits, stone fruits, grapes, strawberries, cane and bush fruits, nut trees, vegetables, beautifying the home grounds, and tropical and subtropical fruits. Chapter I is appropriately devoted to a discussion of the horticultural industry, and the following 10 chapters develop subjects which broadly interrelate with all fruits, such as fruitfulness, pollination, thinning, propagation, soils and sites, planting procedures, soil management, use of fertilizers, pruning, insects and diseases of fruit crops, and their control by spraying and dusting.

Students whose major interest is in fruit growing will find in this book a comprehensive introduction to general horticulture, written in a style that is clear cut, forceful, and most helpful in acquiring a knowledge of sound horticultural practices.

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