most helpful to students and to experimenters undertaking water culture experiments. It is a comprehensive review of the various procedures and possibilities, effectively illustrated with numerous drawings and photographs.—R. J. Muckenfurn.

PLANT ANATOMY

This book on plant anatomy treats in a general way the structure and development of seed plants with emphasis on the angiosperms. The subject is approached from the standpoint of developmental anatomy, but no attempt is made to put forth new theories or concepts or to revise existing ones. Where it is necessary to favor or support one theory or another, the author does it with the purpose of facilitating an understanding of the development, differentiation, function, and relationship of the various types of cells and tissues and the organs which they compose. If the author can be said to stress any one concept, it appears to be that "the plant is a unit on the basis of its development, evolution and structure." The anatomy of any particular species or family is discussed in detail only to the extent that it serves to illustrate a certain type of variation in structure and development. The book is planned in an orderly fashion, beginning with a brief review of the plant body and then covering the cells, meristem and tissue differentiation, the tissues, the vegetative organs, and finally the flower, fruit and seed. It is generously illustrated with line drawings, and the halftones have been collected into a section of 85 plates at the end of the text material.

Each chapter is opened with a review of the various concepts which have been put forward to interpret the subject to be discussed. From this aspect alone, the book is of definite value as a reference and guide for wider study as well as for a thorough treatment of plant anatomy. Another feature which will be of interest to many readers is the careful attention given to the origin of terminology. The straightforward style and explanations of basic terms and concepts should appeal to both students and professional botanists.—W. C. Robecker.

CHEMICAL CONTROL OF INSECTS

The authors of this compact little book have presented a general survey of the important chemicals which are utilized for insect control. The subject matter is divided into 16 chapters. Major chapters cover fumigants, insecticides of plant origin, arsenicals, petroleum oils, coal tar derivatives, and the chlorinated persistent insecticides.

The chapters are written with information on the history, methods of using the insecticides and the chemistry of the compounds. Each chapter contains references, and an author and subject index is given at the end of the book. None of the literature subsequent to 1946 is included.

The science of insect control with organic chemicals has advanced very rapidly in the years since 1946 and recent literature on insecticides is voluminous. Some readers may wish to utilize a handbook of this kind in order to quickly obtain a general understanding of the status of chemical control of insects as World War II was ending.—J. T. Medler.

SUGAR, FACTS AND FIGURES, 1952
United States Sugar Council, D. M. Keiser, Chairman. 910 17th Street, N. W., Washington 6, D. C. 176 pages (illus.) 1952.

This book contains a wealth of figures and notes on the production and distribution of sugar and its relation to trade. Two chapters and a number of appendices are devoted to the various United States legislative Acts and international agreements concerning the sugar industry.

PRODUCTION OF FIELD CROPS

The fourth edition of Wolfe and Kipps' Production of Field Crops is a carefully revised and up-to-date successor of the widely-used classroom and reference text for the beginning course in field crops first published in 1924.

Of particular value in the current edition are new chapters on the history of American agriculture (the initial chapter), and on Grassland farming. Another significant change is a new, separate chapter on rice which is placed along with the other chapters on grain crops in Section II of the book. Further revision has substituted many more recent references for many which were cited in the earlier editions. In so doing, the authors have, in effect, rewritten some of the chapters to assemble a vast store of new information reported by investigators throughout the country. The authors, however, have followed essentially the same outline adopted by the American Society of Agronomy in the early 1920's which was used in the preparation of the first edition.

Chapters in Section I continue to deal with the more generalized aspects of production common to most crops, covering in 19 chapters such subjects as the economic aspects of crop production, adaptation of crops, the value of good seed, fertilizers and lime, preparation of the seedbed, tillage, harvesting and storage, pasture and meadow management and crop rotation. Section II with separate chapters on the major crops or crop groups covers grains, legumes for seed, forage crops, root crops, fiber crops, tubers, sugar plants and stimulants.

PRINCIPLES OF FARM MANAGEMENT

This is a broad presentation of the general principles of farm management. It is intended by the author to be applicable to all areas and all systems of farming, and was written to cover all major problems involved in operating a farm business enterprise.

Of especial value as contributions to the growing literature on farm management are the first four chapters in which the author outlines the field of farm management, the need for and basis of farm management information, the place of economic theory in farm management and the collection and analysis of management data.

Looking off from that discussion, the book goes into comprehensive discussions on farm records, accounting systems, types of farming, price levels, production and labor efficiency, marketing practices, taxes and social security, managing farm finances, farm business arrangements, and other related topics.

The author has purposely avoided statistical tables illustrating management principles, explaining in part that "instruction is much more effective if illustrative material is based on a local situation, and it is suggested that each instructor use local and state materials for the demonstration of principles."

AMERICAN TOMATO YEARBOOK, 1953
Edited by John W. Carncross, 8 Elm St., Westfield, N. J. C. S. Macfarland, Jr. 40 pages. 1952. $2.00.

As with the 1952 edition, the American Tomato Yearbook for 1953 contains up-to-date information of interest to research workers, growers, shippers, canners and dealers. Contents include a list of recent references to tomato culture, diseases, pests and their control, and a key with illustrated map of all tomato diseases. There is also information under such headings as "Tomato Packing," "Hormones," and "Grade Requirements for Canning and Processing." Charts and graphs depict all aspects of the tomato industry.

MENTION
