

other texts, and in most cases this transfer has reduced their value in that they were not specifically designed for their present context. This has the effect of making the presentation scrappy and the density of information variable and in many places very low. For example, there are given very few quantitative data on the composition of plant tissues and no information on the composition of plant proteins, though both types of data are readily available.

In view of this latter criticism, one might hope that the qualitative data be satisfactorily presented, but unfortunately, this is not the case, as its chemical content is particularly open to criticism. Many substances are mentioned without any indication of their structure being given, other substances of quite elementary importance, such as the unsaturated fatty acids, are inadequately described and some of the information given is quite inaccurate. Isocitric acid is not "the D-isomer of citric acid", haemocyanin is not, so far as we know, closely related to chlorophyll, and phosphorylases are not to be confused with phosphorylating enzymes. These are just a small sample of the many errors which suggest that the author would be more at home in some other field than the chemical one. Finally, the price is rather high for a book of this size and the text would have to be very greatly improved to justify it.

G. LEAF

CELLULAR BIOLOGY

Les Facteurs de la Croissance Cellulaire

Activation et Inhibition. Publiés sous la direction de Prof. J. André Thomas. (Exposés Actuels de Biologie Cellulaire : 2è série, 1956.) Pp. xii + 428 + 3 planches. (Paris : Masson et Cie., 1956.) 4,000 francs.

A GREAT many books and reviews on the biology of the cell have been produced in recent years, and since the War many new techniques have been applied to this field of research with startling success. Here is yet another review, and although many of the topics dealt with have been more widely surveyed in recent years, often by the same authors, this new collection of articles is nevertheless valuable. With ten authors involved in the production of nine chapters there is inevitably some unevenness in quality. On one hand, some authors have notably failed to include references to all the major work in their field, while on the other an outstanding contribution with a most comprehensive bibliography is that of Chouard and Thimann, who discuss "Les facteurs de la croissance cellulaire végétale".

The reviews included range from the synthesis of proteins through growth in animal and plant cells, growth and differentiation in embryos, the inhibition of mitotic activity, wounding and grafting, to a final review of cancerous growth. Brachet's paper, entitled "Les facteurs d'activation et d'inhibition de la synthèse des protéines", forms an excellent introduction to this subject, and could be read with great advantage by final-year honours students. This can also be said of the chapter by Chouard and Thimann mentioned above. The other contributions are less likely to have a general appeal. In particular, it is remarkable that in a book of this nature there should be no chapter dealing with the great advances which have recently been made in our understanding of the normal physiology of cell division. Instead there are

two chapters on "Les facteurs de la mito-inhibition" (Deysson and Dustin), and one on "Les facteurs de la cytonarose" (Gavaudan), and, although all are interesting, they deal primarily with the toxicology and pharmacology of mitosis.

The final two chapters, on wounding and grafting (May) and on cancer (Oberling), are both interesting, but they are too brief to be of any great value. Indeed the whole book is of an introductory nature, and, apart from the serious omission mentioned above and the pharmacological over-emphasis, its greatest value will be to provide an outsider with some knowledge of modern research work on cellular biology.

W. S. BULLOUGH

A FARMER'S GUIDE TO ANIMAL DISEASES

Veterinary Guide for Farmers

By G. W. Stamm. Edited by Dallas S. Burch. Third edition. Pp. 384. (Chicago, Ill. : Windsor Press, 1957.) 3.95 dollars.

ANIMAL diseases are of great importance to all farmers, for upon their incidence can depend the success or failure of the enterprise. A reduction in the losses caused by animal diseases would greatly benefit the farming community, and the aim of this book is to assist farmers to accomplish this by providing them with information on the diseases which can affect their stock.

The book has been written clearly and concisely, and much technical veterinary knowledge has been simplified and expressed in a manner which can be understood by practical farmers. The book is well produced and excellent photographs and informative diagrams make the author's meaning clear. As the book was written for American farmers it deals with poisonous plants, parasites and diseases which are unknown in the British Isles, and advises the use of drugs, such as antibiotics, which cannot be purchased by farmers in these islands. Also, in dealing with some diseases, no mention is made of prophylactic preparations which British farmers are using extensively. However, providing the reader has the knowledge to appreciate which sections are applicable to his particular conditions, he can obtain information about the diseases which can affect his stock, and the measures which can be adopted to prevent their spread.

This book, however, aims at taking the farmer further than the elementary principles of first aid and the important aspects of disease prevention, and provides information which will enable him to diagnose and treat disease. Skill in diagnosis is an art which can only be acquired by long experience, and text-book knowledge can, in certain cases, increase losses by leading to an inaccurate diagnosis and faulty treatment. An additional point is that veterinary surgeons are relying increasingly on diagnostic aids such as bacterial examinations and biochemical analyses which are not available to farmers. Other sections of the book dealing, for example, with the diagnosis of pregnancy, do not stress the time and practice needed to acquire skill in the technique.

The book is an excellent one of its kind and contains much valuable information, and, in the foreword, the author warns his readers not to take chances with sick