detail. In contrast the epidermal ridge pattern of the fingers and palms is dismissed in a single comment that they are unique to the individual, and the section on the brain has practically no comment on its changes during foetal development.

This book is difficult to read as a continuous text, and as a source of reference I think people will prefer the more comprehensive neonatal clinical texts available on various systems.

VICTOR DUBOWITZ

Nutritional Technology

Introduction to Food Science and Technology. By George F. Stewart and Maynard A. Amerine. Pp. xiii+294. (Academic: New York and London, January 1973.) \$12.50.

Food science differs from other sciences in drawing on a wider range of disciplines for its techniques; the authors have done well to cover most of them in less than 300 pages. Each chapter is a wide ranging survey of a subject starting with an introduction to the basic concepts and generally succeeding in indicating its scope and depth. The selected references given at the end of each chapter provide a useful introduction to some more detailed sources of information.

The book centres around an excellent chapter "Food processing and preservation" which summarises the diverse techniques used and explains the scientific basis of each. Examples are taken from commercially available products to illustrate these preservation techniques and to explain some of the technological problems encountered with each.

The book starts with a brief history of the development of food processing and then summarises the world food situation, emphasising the important role that food technology will have to play in resolving the world food crisis. There is then a chapter on food quality and its assessment (surprisingly the least successful in my opinion) followed by a survey of human nutrition which includes a section on the effects of raw material handling, processing and storage on the nutritive value of food.

After the chapter on food processing and preservation there are shorter chapters on packaging, safety and sanitation (which includes water supply and effluent treatment), food laws and careers in food science and technology. These last two chapters refer mainly to the United States but still make worthwhile reading for the British student.

Almost all foods are manufactured from natural products and consequently all workers in the field (both scientists and technologists) have to come to

terms with the variability of their raw material. To do this it is essential that they have some knowledge of statistics and agriculture and for this reason I regret that the authors chose not to include a chapter on either subject. Perhaps the inclusion of two further chapters would have increased the cost beyond the means of the "prospective food scientists and technologists" for whom it was written.

The authors must be congratulated on condensing so much of the essence of food science into this book and on maintaining a comprehensible and readable style throughout. It would be a useful addition to the bookshelf of any student of food science as well as to that of graduates of other disciplines starting work in the field.

JOHN WOODMAN

Ethylene in Plants

Ethylene in Plant Biology. By Frederick B. Abeles. Pp. xii+302. (Academic: New York and London, June 1973.) \$18.50.

THERE was a time when auxin was invoked as the master controller of all plant growth and developmental processes. It now seems that ethylene, whose dramatic effects on plants have been known for more than 70 years, is rapidly slipping into that role. In the past 10 years there has been a veritable explosion of research into the physiological actions of ethylene directed towards assessing its significance as a 'natural' hormone.

Dr Abeles has made a thorough survey of the bulky and confusing literature on this topic from the earliest indications of ethylene damage to plants over a century ago to the most recent and sophisticated biochemical and physiological studies. The topics covered are far ranging and include such matters as the practical use of ethylene and related compounds in plant production, the part played by ethylene as an air pollutant, its chemistry and analytical techniques for its estimation. Anybody interested in plant hormones and the chemical control of plant growth and development will find this a mine of information and references.

Having read the book from cover to cover, however, the reader will still be in doubt as to the importance and significance of ethylene as an endogenous growth regulator. Ethylene seems to do everything, but inconsistently, and all this is reported thoroughly and fairly. Although Dr Abeles is clearly a believer in ethylene as a major plant hormone, he has been unable to weave from this tangle of the literature a logical story to convince the sceptic. But he should not be criticised on this score; the time honoured auxin saga is no clearer.

L. J. AUDUS

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