
Book reviews

Hawtin, C.; Webb C, (eds): Faba Bean Improvement. Proceedings of the Faba Bean Conference Held in Cairo, Egypt, March 7–11, 1981. The Hague: M. Nijhoff Publ. for ICARDA/IFAD Nile Valley Proj. 1981. X/390 pp. Hard bound Dfl. 100.00.

Faba beans (broad beans) are among the oldest crops in the world. Today they are a major crop in such countries as China, Egypt and the Sudan. They are widely grown for human consumption throughout the Mediterranean region, in Ethiopia and in parts of Latin America. In parts of Europe, North America and Australia there is a growing interest in faba bean production for stock feed.

'Faba Bean Improvement', being the Proceedings of the First International Faba Bean Conference, held in Cairo, Egypt, covers a wide range of topics, including papers on genetic resources and breeding (chapters 1–9), agronomy and physiology (chapters 10–18), Orobanche, diseases, pests and resistance (chapters 19–30), yield stability and new technologies (chapter 31), nutritional aspects (chapters 32–38), and national programs (chapters 39–40). The book provides a wealth of information and is at present the best reference book on the subject. As such it can be recommended to those interested in faba bean production and improvement.

Some reservations should be made, however. The quality of the papers is variable, to say the least. This lack of balance is accentuated by the way the book has been edited. Although the chapters have been arranged in a certain sequence they are not grouped together in sections indicating their connection. Consequently, the structure of the book lacks the clarity so wonderfully achieved in a recent publication by the same editors (Lentils 1981). Lastly, information on faba bean production and improvement for important production areas such as Ethiopia and China is absent, and contributions from these countries are lacking. It is to be hoped that they will be included in the Proceedings of the Second International Faba Bean Conference.

E. Westphal, Wageningen

Catcheside, D. G.: Genetische Rekombination – Genetik-Grundlagen und Perspektiven. Darmstadt: Steinkopff 1982. x + 171 pp., 52 figs., 41 tabs. Soft bound DM 36,-.

The book, a translation of the 1977 first edition, is a useful addition to textbooks on general genetics.

In the first chapter the author summarizes the most important recombination processes in eukaryotes, and in the following four chapters the accent is on specific recombinational events in various eukaryotes, e.g. *Neurospora crassa* and other fungi, *Drosophila* and *Zea mays*. Recombination processes in bacteria and phages are described on only 32 pages.

In view of the great advances in the last years, the book cannot be up to date. For instance, the distinguishable types of recombination processes are not presented as characteristic

examples. The book will be valuable, however, especially to scientists who are engaged in recombination research on eukaryotes.

E. Günther, Greifswald

Boulter, D.; Parthier, B.: Nucleic Acids and Proteins in Plants I. Encyclopedia of Plant Physiology, New Series, vol 14, part A. Pirson, A.; Zimmerman, M. (eds). Berlin, Heidelberg, New York: Springer 1982. xx + 768 pp., 135 figs. Hard bound DM 268,-/\$ 119.00.

In the last decade plant biochemistry came to age and at present it plays no longer the life of a Cinderella in modern Biological Sciences. Since the former edition of the Encyclopedia of Plant Physiology approximately 25 years ago, significant progress in the knowledge about plant proteins and nucleic acids, including their synthesis, degradation and specific functions, has been achieved. No doubt, research in this field was greatly stimulated by progress in microbial and animal biochemistry. Volume 14A of the new series of the Encyclopedia of Plant Physiology reflects fully this tremendous development and provides comprehensive insight into the peculiarities of plant metabolism. The volume is divided in two parts: one deals with the biosynthesis and metabolism of proteins and proteinogenic amino acids, the other is devoted to the correlation of nucleic acids and proteins with specific physiological processes in plants. The individual chapters were written by internationally well-known authors.

In part I excellent surveys about ammonia assimilation and amino acid metabolism, plant protein synthesis and degradation as well as protein turnover and protein types (leaf and storage proteins) are presented, followed by chapters about microtubule proteins and P-proteins, plant peptides and the immunology of plant proteins.

Part II is introduced by a well-written chapter about seed development. Plant embryology, growth and differentiation is covered by articles on seed germination and seedling growth as well as on macromolecules involved in cell wall differentiation and leaf senescence.

Each chapter is followed by an almost carefully selected list of references covering the period up to 1980. Three reliable indices – an author index, a plant name index and a subject index – help the reader get rapid access to detailed and specific information.

The volume is comprehensive and informative, well written, well produced and interesting to read. It provides solid knowledge in this rapidly expanding field. It may be considered essential to all scientists working in the field of plant physiology, plant biochemistry, plant growing and plant cultivation.

It can be justifiably assessed as a high level work on plant biochemistry and plant physiology.

E. Hofmann, Leipzig