

integrate existing knowledge on crop physiology into a clear understanding that will, as the new-book announcement claims, maximize crop production anywhere in the world. That is a tall order for any single book.

David Midmore

Plant-Environment Interactions (Third Edition). Edited by B. Huang. Boca Raton FL, USA: CRC Press/Taylor and Francis Group (2006), pp. 388, £74.99. ISBN 0-8493-3727-5. doi:10.1017/S0014479707005157

A better understanding of plant-environment interactions is critical for humankind's future prosperity and indeed survival. Building on the first two editions of *Plant-Environment Interactions*, this text describes recent advances in cellular and molecular mechanisms responsible for plant tolerance to abiotic stresses. The authors attempt to integrate knowledge of whole organism physiology within 'omics'-based approaches to identify and validate the function of genes implicated in the control and regulation of plant response to environmental stress.

The text is organized into twelve chapters that address cellular and molecular changes to: heat stress, drought and salinity tolerance, together with adaptation to low phosphorous availability. The final two chapters review physiological and biochemical indicators of stress tolerance and breeding approaches to improving abiotic stress tolerance. Those who wish to gain insight into physiological mechanisms implicated in plant-environment interactions will not be disappointed. Chapter 11 (Physiological and Biochemical Indicators for Stress Tolerance) is good on the methodology and principles used to establish surrogate systems to monitor stress tolerance or plant injury.

The final chapter (Breeding and Genomic Approaches to Improving Abiotic Stress Tolerance in Plants) provides a useful introduction to the integration of breeding and genomic approaches to the improvement of abiotic stress tolerance. However, I found the sections on QTL analysis somewhat disappointing and misleading. The principles and methodology used for quantitative trait analysis are based on classical Mendelian genetics. More importantly, the concepts and experimental designs into well-conceived and executed QTL studies provide a robust route to unravelling the mechanisms and processes responsible for the way in which plants respond to external stimuli. Nevertheless, this book provides a very useful introduction to physiological/biochemical aspects of abiotic stresses.

Wayne Powell

Introduction to Fruit Crops. By M. Rieger. New York: Haworth Press (2006), pp. 462, US\$59.95. ISBN-13: 978-1-56022-259-0. doi:10.1017/S0014479707005169

This book gives a comprehensive review of tropical and temperate fruit crop species grown worldwide at the present time. It consists of short chapters on each crop, and includes species that are not always classed as fruits, e.g. nuts (almond, walnut, pistachio, etc.), coffee and oil palm, although their inclusion is explained by the author in the introductory section.

Thirty chapters cover all the major crops and there is a uniform layout for each chapter giving an excellent overview of each crop. Each is divided into eight sections: taxonomy; origin and history; folklore, medicinal properties and non-food applications (including some decidedly odd mythological tales); production (using mainly FAO data); botanical aspects; general culture (which includes details of pest and disease problems); harvest and post-harvest handling; and contribution to diet. There are also 46 pages of generally good quality and informative plates.

The level of interest in fruit generally is high at the present time, and this book is therefore a timely addition to the literature as a reference encyclopaedia. One could always ask for more detail in specific areas, but to do so is to miss the overall point of the book as a whole – a short bibliography is provided at the end of each chapter to direct readers who require further details to appropriate reference texts. It is a real achievement by the author to collate such a vast amount of information into a well-structured and user-friendly volume. It will appeal to a wide readership, from researchers to students and keen amateur horticulturists, and its very reasonable price will attract many individual buyers as well as libraries.

R. Brennan