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Science and Technology of Organic Farming By A. V. Barker. Boca Raton, FL, USA: CRC Press (2010), pp. 224, £44.99. ISBN 978-1-4398-1612-7.

The author is a professor of plant, soil and insect sciences and a retired farmer who regularly teaches organic farming and gardening. The book is the response to his belief that one of the limiting factors of organic farming is the failure to provide adequate plant nutrition. He therefore devotes a substantial part to an introduction to soil and crop science. Plant nutrition covers 'organic' fertilizers, defined as those derived from biological or mineral materials. This section is a comprehensive summary of the functions of 14 essential elements, including crop requirements and deficiency symptoms. However, in my view it does not adequately address some of the specific challenges of organic farming. How can a book about soil fertility and crop nutrition in organic farming not extensively cover legumes and in particular clover grass leys? N-fixation through legumes is after all, the main alternative to synthetic N-fixation and clover-grass leys have many other beneficial properties. Also, animals that are important on many organic farms and present their specific challenges feature only in the chapter about farmyard manure. In both areas, the science of organic farming has clearly moved on.

However, the book presents a basic introduction to crop science that is clearly relevant and provides some useful specific insights into crop nutrition. A narrower title such as 'Aspects of Crop Nutrition in Organic Farming Systems' would have allowed the reader to know better what to expect.

Susanne Padel

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Factor Five. Transforming the Global Economy through 80% Improvements in Resource Productivity. A Report to the Club of Rome By E. von Weizsacker, K. Hargreaves, M. H. Smith, C. Desha, & P. Stasinopoulos. Earthscan, London & Stirling, VA: Earthscan (2009), pp. 400, £24.99. ISBN 978-1-84407-591-1.

This book is claimed to provide the most comprehensive roadmap showing how the world's economies can rapidly reduce their resources consumption and associated pollution, while underpinning strong economic growth. The authorship comprises Ernst von Weizsacker and four young Australian engineers and scientists with sponsorship from the Aachen Foundation Kathy Beys, Griffith University, Commonwealth Scientific & Industrial Research Organisation, Conics Ltd. and Australian National University.

After an introduction by the senior author, the text is in two parts. Part I involving the other authors is entitled 'A Whole System Approach to Factor Five: The Natural Edge Project' and considers sector studies on residential and commercial buildings, the steel and cement industries, improvements in agricultural energy and water productivity, food and hospitality, and aspects of the transport industry (cars and light vehicles, heavy freight trucks, and air travel). Part II is authored by von Weizsacker and entitled 'Making it Happen', covering regulation, economic instruments, addressing the rebound dilemma, a long-term ecological tax reform, balancing public with private goods and sufficiency in a civilized world. Pleasingly, the book is well illustrated and referenced.

Notwithstanding any pomposity in the claims made in the 32 supportive statements and five quotes from the sponsors, this book is a useful aggregation of facts and opinions. Repetition is a problem, and expert readers in the various industrial sectors and the environment generally will learn little or merely have any prejudices reinforced.

Related, more readable but polemical accounts can be found in Paul Collier's *The Plundered Planet: How to Reconcile Prosperity with Nature* and Daniel Ben-Ami's *Ferraris for All: In Defence of Economic Progress*.

John R. Hillman