

Payne, W.A., Keeney, D.R., Rao, S.C. (ed.): **Sustainability of Agricultural Systems in Transition.** – ASA Special Publication Number. American Society of Agronomy (ASA), Crop Science Society of America (CSSA), Soil Science Society of America (SSSA), Madison 2001. ISBN 0-89118-149-0. Pp. 272, USD 48.00.

The reviewed book contains Proceedings of an International Symposium of the same title organised by ASA, CSSA, SSSA, the World Bank, and International Federation of Agricultural Producers held on 20-22 October 1998 in Baltimore, USA. Also included were papers from the concurrent symposium "Food Security and Sustainable Agricultural Development for the 21<sup>st</sup> Century in India".

The book starts with a Table of Contents followed by a Foreword by D.W. Nelson, President of the ASA, and Preface written by the three editors. The subsequent list of contributors lists 44 specialists from 9 countries: Brazil (1 contributor), Ethiopia (1), Honduras (3), India (1), Italy (1), Mexico (1), Mozambique (1), Thailand (5), and USA (30). The majority of contributions were presented and written by well known specialists. Next, Conversion Factors for SI and non-SI Units are included. The text contains 26 contributions including two panel discussions: Sustainable farming systems - are there any shortcuts? and Market/policy issues and regulatory frameworks for sustainable agriculture. The last seven from the 26 contributions are devoted to food security and sustainable agriculture for the 21<sup>st</sup> century in India. No index was added at the end of the book.

As seen from the above information, the book represents another valuable source of facts on agricultural production world wide as well as a qualified assessment of possibilities to achieve sustainable agriculture at both the world and local levels. To the existing innumerable definitions of agricultural sustainability let me add another from the book (p. XI): Sustainability is "economic growth that does not deplete irreplaceable resources, does not destroy ecological systems, and helps reduce some of the world's gross social inequalities". It was emphasized (p. IX) that "the need to be profitable without depleting non-renewable resources or endangering ecosystems is a common denominator". According to one quotation (p. 8)

from a 1998 paper by Ruttan the most important issues for the 21<sup>st</sup> century can be characterized as "the 2-4-6-8 scenario – a doubling of population, a quadrupling of agricultural production, a sextupling of energy production and an octupling of the size of the global economy by 2050".

In the contribution of the representative of the World Bank, the term "sustainable intensification" was used which with my simplification includes mainly the integration of both conventional technology and biotechnology applications. Hence, the agricultural technologies of food production are closely linked to an overall economic growth.

There is no doubt that any reader interested in current global problems will find in this volume much useful information on sustainable agriculture, land management, fertilizer use, irrigation, and many economic and social aspects of the future development of human beings. Although the word "photosynthesis" is not frequent in this book, I recommend its reading to all who feel in some way responsible for the future fate of mankind. Scientists and scholars should accept more responsibility for the future way of human life on this planet. And specialists in any part of photosynthesis research have to be involved in both elaborating new ways of increasing the harvesting efficiency of Sun light by crops and their applications in breeding and agronomy. Myself, I do not believe that any form of agricultural sustainability will be reached without profound changes in economic criteria and of our priorities for a happy life.

This book successfully combines all the necessary aspects of sustainability. I highly recommend its reading to both those who had not considered this human issue of our life and to readers who are already engaged in thinking and contributing to the supply of sufficient food to everybody who is in need.

L. NÁTR (*Praha*)