

Evans, L.T.: **Feeding the Ten Billion** (Plants and Population Growth). - Cambridge University Press, Cambridge 1998. 267 pp. ISBN 0-521-64081-4.

This book is basically a wise account of an interaction between world population and the state of agriculture. The links between man and plant are being followed in the framework of the past 10 000 years and we are invited to undertake historical excursions to various civilizations, e.g. Mayan, Chinese, Sumerian and Egyptian. The mankind reached its first milliard in the second quarter of 19<sup>th</sup> century and since then the interval between the preceding and the following milliard has been continuously shortened. A single chapter is devoted to each of those intervals. The book clearly demonstrates that so far the intensification of agricultural production has been able to cope with the increased rate of demographic growth and that the Malthusian prognosis has been false. However, with the prospect of doubling the population within the next fifty years the problem of food supply has become precarious. The yield potential of our crop plants seems to be already exhausted and will possibly not match requirements of continuously growing population. Various aspects of this new challenge are being analyzed in the closing chapters of the book including the imperative for raising the yields or utilization of marginal environments.

The author is well equipped for introducing the above problem himself primarily a physiologist in plant development and also a specialist in cereal production he spent seven years as a Chief of the CSIRO Division of Plant Industry in Canberra. Therefore he is a competent guide in evaluating the contribution of science in increasing yields and in keeping pace with demographic growth. The milestones of agricultural research oriented towards intensification of plant production are nicely illustrated in the book. They include the introduction of agricultural chemistry which enabled to develop the theory of plant mineral nutrition—the oldest and so far most efficient intensification factor. Among the others ones are the introduction of Mendelian laws of heritability into plant breeding, the use of the knowledge on environmental control of flowering to optimize the cultivation of some staple crops, the discovery of potent and cheap insecticides (such as DDT) and herbicides (such as 2,4-D), the Green Revolution, the integrated pest management and finally the genetic engineering. The global agriculture is an intricate and enormously complex system. Thus, in parallel with the history of intensification factors we follow the history of limits for their introduction and shortcomings which accompany them. This is a story of silent spring due to pesticides utilization, a story of enormous soil degradation due to unlimited mechanization, a story of decreasing water availability for irrigation. Also, these are the arguments for introducing sustainability in agriculture not as a slogan but as a concept. These are the dilemmas inherent to technological progress itself. However, many others equally important, stem from sociological, political and cultural background. The division of the world on rich North and poor South and increasingly assymetrical demographic growth of these two parts created the paradox of famines and undernourished millions in the situation when there is more food and better diet for a statistical citizen of a globe than thirty years ago. Thus, the political and social dimensions make to a great extent the future so uncertain.

Professor Evans touched most of the aspects of the problem and left it open-ended with many possible scenarios for the future. This is only fair as there is not a conclusive solution. Also, he possesses enough authority and relevant experience to treat this crucial topic in very personal way. There is no sense in assuming other proportions and other aspects than those we have been presented. The book is a highly intelligent reading and according to its style also an entertaining one. At the same time it has its social and moral undertones which are not commonly encountered.

It is a recommended reading for all those who are still able to think beyond *carpe diem*, and who feel like sharing some kind of global responsibility. It will be certainly enjoyed by students and teachers in agriculture and horticulture. Also, it will certainly provide many useful ideas for those concerned with life sustainability and its particular aspects.

In addition: the book contains enough illustrative figures, index and is a relevant source of literature in this particular area (228 references).

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