



Book Review

Biotechnology in agriculture and environment

J.K. Arora, S.S. Marwaha, R. Grover (Eds.); Asiatech Publishers Inc., New Delhi, 2002, vii + 323 pages, ISBN 81-87680-08-3,

The importance and relevance of the impact that biotechnology has on agriculture and environment is widely known. It is of particular importance to developing countries such as India where they are heavily dependant on successful agriculture and natural resources. However, the developing countries may be faced with major constraints and therefore investments are made with caution and in turn yielding good results. Much progress has been made in biotechnology and its applications in various sectors. The book contains the proceedings of an international symposium on "Biotechnology in Agriculture and Environment" held in 1998 in Chandigarh.

The book opens with an introductory chapter giving an overview of the biotechnological developments in various sectors of agriculture and the environment, and also the challenges and existing mechanisms. The 35 papers contained within this volume are categorized in three sections, two of which are devoted to applications of biotechnology in agriculture and environment and the third is focused on bioinputs for achieving sustainability. Section one referred to as 'methodologies for agricultural improvement' contains literature focused on the applications of plant cell, tissue culture, gene transformation to produce for example an increased shelf life of fruits and vegetables and improvements in food processing. The second section is

referred to as the biomonitoring and biomanagement of environment in which research is directed to biotechnological inputs such as biofertilizers and biopesticides for environmental improvements. As an example several strains of rhizobia have been isolated and screened for their nitrogen fixing ability so as to produce better crop yields. Monitoring of pollution by using biosensors and bioindicators is also being investigated. It also covers bioremediation of contaminated soils and waste recycling using new microbial consortia. Further papers in this section are directed to the use of biotechnology in the management of waste from food processing, textile, dyeing and paper mills. The third section features the use of bio-inputs to accomplish sustainability.

In general, a perspective on biological intervention in agriculture and environment is presented in a single volume. Each contribution contains a lengthy set of comprehensive references. The book is aimed at providing an invaluable reference for agricultural and environmental scientists, particularly tissue culturists, geneticists, plant breeders, biochemists, microbiologists, and biochemical engineers. It is also useful for researchers and post-graduates students with interest in the relevant sectors.

Jamie Mistry, John F. Kennedy*
*Chembiotech Laboratories,
Institute of Research and Development,
University of Birmingham Research Park,
Birmingham B15 2SQ, UK*

* Corresponding author.