

Metz, M. (ed.): ***Bacillus thuringiensis: the Cornerstone of Modern Agriculture***. (Published co-simultaneously as Journal of New Seeds Vol. 5, No 1 and Nos 2/3, 2003.) - The Haworth Press, Binghampton - New York 2003. 242 pp. USD 89.95. ISBN 1- 56022-109-7.

More than one hundred of years elapsed from the finding of the specific insecticidal activity of *Bacillus thuringiensis*. Genetically modified crop plant cultivars carrying the *Cry*-transgenes of *B. thuringiensis*, which are used for more than ten years, are still great problem for most of the population despite that the science and technology results do not leave any doubts of their safe use and support their general planting. A lot of new data are included in the recent compendium on *B. thuringiensis*  $\delta$ -endotoxin transgene.

This book consists of twelve different articles which together give comprehensive and accurate account of the current status of risks and benefits of Bt-based pesticides and transgenic crops including rice, potato and cotton. Its prime beneficiaries will be students, scientists and professionals dealing with pest control, environmental protection and regulation of transgenic crops.

The authors of different chapters are from both industrial and developing countries: USA, Israel, India, Philippines, Manila, Peru and others. By this way, the book also gives outlook in word state of use and potential of agriculture application of transgene-based biotechnology. All chapters except the first one deal with transgenic crops carrying the Bt-gene. The first chapter is devoted to the direct use of *B. thuringiensis* bacteria in plant protection, which has already fifty years tradition. Spraying by bacterial suspension or the Cry protein is used in limited extend mainly in USA and other developed countries for the protection of fruit trees and plants and vegetables. *B. thuringiensis* ssp. *israelensis* is used for mosquito control. Aquatic habitats are sprayed

to destroy mosquito larvae. *Bacillus sphaereus*, which is more efficient in *B. thuringiensis* in some water habitats, is used to eradicate West Nile virus by mosquito.

Most of the chapters, with the exception of last four, are reviews giving broad outlook in different aspects of the problematics of Bt-transgenic plants. Transgenic plants are available in crops which make most of agriculture plant production (maize, cotton, potato, rice).

The last four chapter are a conference type of contributions describing recent experimental results with transgenesis or transgenic Bt-plants. The titles of individual chapters are: Introduction, The safety of *B. thuringiensis* for human consumption, Effects of Bt on non-target organisms, The role of microbial Bt products in U.S. crop protection, The utility and management of transgenic plants, Engineering of Bt transgenic rice for insect pest protection, Fulfilling the promise of Bt potato in developing countries, Ecological impacts of Bt-cotton, Current resistance management requirements for Bt-cotton, A rapid assay for gene expression in cotton cells, Cauliflower plants expressing a *CryIC* transgene control larvae of diamond moths resistant or susceptible to *CryIA* and cabbage loopers, Expression of CryIAb protein in genetically modified sugarcane for control of *Diatraea saccharalis*, Two years of insect protected Bt transgenic cotton.

The book shows great outcome of Bt crops as a more advanced step forward in the protection in comparison with protection by insecticides and their perspectives for the future. At the same time it demonstrates the transient character of European negative position to GM crops.

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