Book Reviews

Kennedy, G. G., Sutton, T. B. (eds.). 2000. Emerging Technologies for Integrated Pest Management: Concepts, Research, and Implementation. APS Press – The American Phytopathological Society, St. Paul, Minnesota, 526 pp. ISBN-0-89054-246-5.

The concept of the Integrated Pest Management (IPM) articulated in the late fifties shows constant advance in both the theory and practice and became the prevailing paradigm for crop protection in the World. In order to facilitate the development and adoption of emerging new technologies of pest control into IPM system the American Phytopathological Society, the Entomological Society of America, the U.S. Department of Agriculture, and the U.S. Environmental Protection Agency organized an international conference during 8-10 March 1999 at the North Carolina State University, Raleigh, NC.

As pointed out by the U.S. National Research Council (NRC), in a recent report titled "Ecologically Based Pest Management: New Solutions for a New Century" the IPM in its present form is dominated by a focus on pesticides and individual pests. It is not correct and the NRC calls for a shift in the IPM paradigm away from managing components or individual organisms to an approach that examines processes, flows, and relationships among organisms and to use them for new pest management tools.

This book contains papers presented at the Conference arranged in eight sections:

Section 1 – "Background" contains three chapters dealing with perspectives and progress in IPM. Of special interest is chapter by G. G. Kennedy that provides a historical perspective and identifies 10 key points that determine the parameters within which IPM must operate.

Section 2 – "New diagnostic techniques for IPM" contains four chapters showing that the field diagnostic testing has advanced tremendously during the last decade. The overview written by C. L. Sutula (USA) and other three chapters provide many useful information on diagnostic technologies that employ: antibodies, nucleic acids, an/or bioassays in respect to detection of resistant insects and pathogens, and pesticides residues.

Section 3 – "Genetic engineering for IPM" contains ten chapters discussing detailed and general concepts, status, and potential of transgenic plants in IPM. Special chapters deal with use of plants with genetically engineered resistance to herbicides, pathogens and insects. Especially broadly was discussed use of plants engineered with genes of *Bacillus thuringiensis*.

Section 4 – "Biological control" contains eight chapters covering biological control technologies against insects, weeds and pathogens. Of special interest to readers will be chapters concerning habitat management to enhance biological control in IPM and challenges to the commercialization of biocontrol technologies for IPM.

Section 5 – "Pesticide technology" contains seven chapters covering various aspects of integrating new fungicide, insecticide and herbicide technologies in IPM. Of special interest is chapter on the role of resistance management to preserve effectiveness of new insecticide technologies.

Section 6 – "Geographical information systems and global positioning systems" contains two chapters discussing progress and reality of use of GIS and GPS systems.

Section 7 – "Information processing and delivery" contains two chapters dealing with past, present and future of information management and weather forecast for IPM. A list of IPM web sites is provided.

Section 8 – "Progress and challenges" contains three chapters dealing with progress, challenges, politics and policy in IPM systems. Reader will find in this section historical accounts on IPM and its future development. It is stressed that the goal announced by President Clinton in 1993 to have 75% of all the agricultural land in the USA under IPM management by the year 2000 was not fully achieved due to low funding by Congress.

This book should be carefully read not only by plant protection specialists but also by environmentalist and policy makers who should consider better funding of all technologies and research aiming in advancing and improving the present and future IPM programs and technologies.

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