

HRUSKA, A. J., AND M. L. PAVON (eds.). 1997. *Transgenic Plants (Bacillus thuringiensis) in Mesoamerican Agriculture*. Zamorano Academic Press, Tegucigalpa, Honduras, Central America [Available both in English and Spanish]. ISBN 1-885995-41-5 Paperback. iii + 127 p. \$15 + \$5 mailing from Libreria Zamorano, Box 93, Tegucigalpa, MDC, Honduras, Central America.

This small paperback book presents information about integrating pesticidal transgenic crops into Mesoamerican agriculture. It includes an introduction by Allan Hruska regarding the future and status of transgenic crops in Mesoamerican agriculture, chapters by Fred Gould (an overview of integration issues), Wendy Gelerntner (development and commercialization status), J. Antonio Serratos Hernandez (field test regulations for transgenic plants in Mexico), Allison Snow (potential for gene flow between transgenic crops and wild relatives), Alex May Montero (transgenic plant regulations in Costa Rica), Mark Whalon and Deborah Norris (resistance management recommendations for Mesoamerica), Guillermo Carrillo Castaneda (research and development in agro-biotechnology), Tracy Johnson (effects of transgenic plants on agroecosystems), Martha Willcox and David Bergvinson (issues regarding Bt corn in Mexico), and a final chapter on "conclusions and recommendations" that came out of the workshop hosted by the Panamerican College of Agriculture, Zamorano, in Honduras in May of 1996.

The book is well written and would serve to introduce undergraduate and graduate students to the biological, ecological, social, and political issues surrounding the deployment of transgenic crops (especially those containing the *Bacillus thuringiensis* (Bt) toxic gene(s)), not only in this region but elsewhere. Few issues were raised that are irrelevant to the use of transgenic crops in agricultural systems throughout the world. As pointed out by Fred Gould on the cover of the book, "There is little doubt that pesticidal plants will get to the marketplace in Mesoamerica. Without intervention by the public sector, the plants that reach the marketplace, and the way these plants are used could be very inappropriate."

The workshop participants came to several conclusions and made recommendations, including: (a) it is important that the correct Bt toxin genes are used against Mesoamerican pests; certain crops (such as tomato) are high priority crops for research because pesticides are used frequently on this crop; various agencies (international and universities) should develop and evaluate transgenic crops in the region so that appropriate technologies are available for the region; development of multi-gene, multi-toxin transgenic plant material should be a high priority to ensure durable use; transgenic plants that offer resistance to multiple crop problems should be developed; appropriate use of transgenic crops in Mesoamerica should be encouraged; resistance management programs are essential if Bt sprays (an important IPM tool) are not to be lost; resistance management strategies recommended include the combination of high dose and refuges. In addition, recommendations were made regarding training and dissemination of relevant information throughout Mesoamerica and follow-up responses by countries and groups. A final plea was made to harmonize laws, regulations, and policies regarding the use of transgenic plants throughout Mesoamerica.

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