

## BOOK REVIEWS

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breeding of *Helicoverpa*, resistance to gram legumes, alternative molecules as candidates for genetic transformation of crops for resistance and strategies for development of *Helicoverpa*-resistant transgenic crops.

Interesting and useful information has been presented in terms of the adoption of Integrated Pest Management (IPM) approaches, which have expanded dramatically in cotton production in countries like Australia. Adoption of IPM has been facilitated by on-farm demonstration, and increased availability of selective pesticides and transgenic crops which are compatible with IPM. Emphasis has been laid on an integrated approach to the *Helicoverpa/Heliothis* problem, so that it may be possible to achieve a long-term goal of sustainable pest-management strategies with minimal impact on the environment.

Monitoring and forecasting *Helicoverpa/Heliothis* population are discussed besides the life table analysis emphasizing key mortality factors, success and failure and emerging trends in the management and prospects of future research. Equal emphasis has been laid on high priority of biotech-assisted programmes using multidisciplinary teams that embrace the application of genomics to enhance utilization of genetic resources in plant breeding programmes. The role of biotechnology acting as a functional bridge between germplasm collections has been highlighted with breeding programmes facilitating the mining of genetic resources for drought, insect and disease resistance. Recent trends in research involving molecular breeding of *Heliothis* resistance to gram legumes, alternate molecules as candidates for resistance and strategies for development of *Helicoverpa*-resistant transgenic crops have also received considerable attention.

In today's scenario, management of *Helicoverpa/Heliothis* holds priority and the book under review brings to light multidimensional profiles of the subject, by a host of competent authors whose practical experience in the field, notably

scientists of ICRISAT, has brought to light some of the major problems and solutions to the same. The editor Hari C. Sharma, a competent entomologist, needs to be congratulated for compiling this useful and excellent volume, which should adorn the shelves of entomologists and agricultural scientists.

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**Seeds of Plenty, Seeds of Hope – On-farm Conservation of Indigenous Genetic Resources: The Asian Experience.** K. Vijayalakshmi and A. V. Balasubramanian. Centre for Indian Knowledge Systems, No. 30, Gandhi Mandapam Road, Kotturpuram, Chennai 600 085. 2004. 136 pp. Price: Rs 200.

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This is a timely book since both the Plant Variety Protection and Farmers Right Act 2001 and the Biodiversity Act 2002 have now become operational. Both these Acts emphasize the importance of conserving biodiversity at three levels – ecosystem, species and varieties/land races. In the past, *in situ* on-farm conservation of intraspecific variability was common. Such conservation traditions are now either disappearing or getting diluted. *Ex situ* conservation of perennial plants through botanical gardens and arboreta was also common. Species of keystone value were preserved in sacred groves. As the pressure of population on precious bioresources increases, the urgency of conserving intraspecific variability in village-level seed banks and cryogenic gene banks has increased. This is where the present book which deals with traditional seed conservation techniques is a timely one.

The book consists of a series of papers dealing with different aspects of community seed management. The papers clearly bring out the need for conservation as well as the search for new genes. I would like to congratulate and thank K. Vijayalakshmi and A. V. Balasubramanian for putting together a series of useful papers. These papers are based on practical experience and hence are valuable, since one ounce of practice is worth tonnes of theory. We should rapidly multiply live gene banks both in crop plants and farm animals. Such live gene banks can be set up in the epicentres of agrobiodiversity.

The experience gained in other countries like Bangladesh is also described in detail. The relationship between biodiversity and food security has been brought out well. Biodiversity is not only the feedstock for the biotechnology industry, but it is the very backbone of food and nutrition security systems.

The authors have compiled examples of community conservation and organic farming in a meaningful manner. Gender dimensions of biodiversity conservation have also been highlighted. This book will be found useful by scholars, non-governmental organizations and others interested in assisting local communities to conserve biodiversity. I am glad the book deals with nutrition in a holistic manner. If the various suggestions contained in this book are brought together for implementation, they will help launch an integrated gene management system involving an appropriate mix of *in situ* and *ex situ* conservation and *in situ* on-farm conservation methods. We owe a deep sense of gratitude to Vijayalakshmi and Balasubramanian for sowing the seeds of an integrated gene management system in our country at the community level.

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