

Book review

A.M.R. Gatehouse, V.A. Hilder & D. Boulter (Eds), 1992. Plant genetic manipulation for crop protection. C.A.B. International, Wallingford, U.K. ISBN: 0-85198-707-9. £ 40. Biotechnology in Agriculture, 7.

Previous issues in the series *Biotechnology in Agriculture* dealt with the goals of Biotechnology in terms of crop improvement, methodologies used in Biotechnology and with improvements of specific crops such as potato and rice, with biotechnological approaches.

In the 1990s, genetically modified organisms (GMOs) e.g. engineered crops will become available for the market. In some countries such as the Netherlands, biotechnology and the acceptance of GMOs is bringing conflicts and heated discussions. Lack of communication between the scientific community and the public has created mistrust. The editors of this series want to break through this more or less paralytic situation by reviewing knowledge of the various disciplines, and by reviewing the prospects of application in agriculture.

Chapter 1 describes problems in modern agriculture and the need to increase food production. Chapter 2 deals with the methods of transforming plants. It is very clearly written and up-to-date. Chapter 3 describes the development of transgenic crops by the seed industry, including plant variety rights, patent protection and the changing regulatory systems in the release of GMOs into the environment and their use in food.

The book continues with several examples, such as herbicide resistance in crops (Chapter 4), perhaps the most disputed subject. Chapter 5 depicts strategies to isolate genes for fungal resistance. Although researchwork has not yet been successful it gives a good picture of the techniques used to identify such genes. Chapter 6 outlines the application of *Bacillus thuringiensis* crystal toxin genes, and Chapter 7 surveys insecticidal secondary metabolites, and the use of proteinases, α -amylase, lectins and lectin-like proteins in plant defence against insects. Chapter 8 is a less spectacular contribution on virus resistance and, finally, Chapter 9 discusses some secondary metabolites and their potential in crop protection. The authors concentrate on insecticidal compounds saying little about nematocidal and fungicidal compounds.

In summary, this book gives a good picture of the field and is heartily recommended to students, scientists and those who are interested.

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