
BOOK REVIEW

Book review

Market Development for Genetically Modified Foods

V. Santaniello, R. E. Evenson and D. Zilberman (Eds)
CABI Publishing, Wallingford;
2002; 336pp; £55, US\$100

The title of this book could suggest another in the line of many such publications, outlining the potential market for genetically modified (GM) foods and the trials and tribulations of public opinion and regulation – and indeed it does, but in a very different way from most overviews of this type.

The book is a series of papers presented at a conference on Biotechnology, Science and Modern Agriculture; a New Industry at the Dawn of the Century, convened by the International Consortium on Agricultural Biotechnology Research (ICABRA), Ravello, Italy, June 2001. The book is divided into four main sections dealing with:

- evaluating consumer attitudes to GM foods;
- acceptance by farmers of biotechnology products;
- the role of information systems and of associated regulatory developments;
- industry structure issues.

The authors reflect the international character of the meeting.

The most interesting and valuable overall point to note is the emphasis on quantitative analysis and potential economic impacts. There is much useful hard data in this book, which is lacking from many other digests of the GM food issue. For example the opening chapter 'A Way Forward for Frankenstein Foods' is not a review of the social issues but an

attempt to formulate a mathematical model of uptake of GM crops in terms of price differential, identifying preservation costs, supply and demand, and market share. There is also an interesting short paper (Chapter 4) on price competition and quality benefits from GM foods. The studies in Part I of this volume are generally based on attitude surveys and related market survey techniques. To date, few true market experiments where non-GM foods are actually priced at a premium have been conducted. As non-GM premiums (GM discounts) emerge, more studies of consumer attitudes, and especially of 'willingness to pay', will be required to establish guidelines for non-GM product market developments. These new studies will be informed by the studies reported here.

There are several chapters dedicated to bovine somatotropin (bST), on impact of farm profits, feed management practices and macro-economics. Equally Canola and GM maize and soybeans are dealt with from a practical approach of yield-increase, planting intentions, operators' experience and reasons for adoption of these GM crops.

Farmer acceptance of biotechnology products had been driven by profitability. However, acceptance of these products to date has been under conditions where few GM discounts have been in place. The chapters are important in indicating the extent of profitability and hence of the possible effects of GM discounts on this market.

There are some very interesting chapters on quantifying scientific risk communication and media communications. Chapter 16 gives one of the best expositions and analysis of the furore caused by the release of the work on potatoes by Dr Pusztai in the UK in 1998.

The final chapters deal with industrial development: market structures and the

supply chain, looking at product differentiation and various management strategies taking into account productivity, quality, price and uncertainty.

The final chapter in the volume addresses industry structure in an integrative supply chain assessment. As noted in the early part of this review, ag-biotechnology decisions made in one part of the supply chain (the biotechnology-supplying firms) have implications for other parts of the supply chain (farmers and the food industry). At present,

important tensions and incompatibilities must be resolved between different parts of the supply chain. Chapter 26 offers insights for managing technologies for different parts of the supply chain.

For those interested in facts, economic models of production of GM crops and, supply chain interactions this will be a very useful book to have on the shelf.

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