in agriculture's historical, environmental, philosophical, and social realities. Certainly there are radical ideas here, as there should be for a book with the stated goal of thinking "creatively about the future of agriculture," but nearly all of the ideas are attainable and could evolve from our current agricultural system if Americans collectively wanted them to. Third and finally, all the authors view agriculture as more than just an economic enterprise devoted to producing food, fiber, and other natural goods and services. The visions include concern for the environment, for the people working on or near the land, and for food and fiber consumers in addition to concern for the bottom line.

The first chapter, written by David Danhom, is a history of American agricultural visions. In it Professor Danhom discusses the development of the two contrasting visions fundamental to American culture and agriculture, the "agriculture as a business" vision and the "agriculture as a way-of-life" vision. In the second chapter, Paul Thompson explores the current manifestations of these two visions and discusses the importance and arguments in support of each one. In the three following chapters, Peggy Barlett offers a vision of future farm families, Kate Clancy presents a vision of an integrated food system based on the direct connection of food producers and consumers, and Joan Iverson Nassauer discusses a vision of how the rural and agricultural landscape could be shaped to augment and communicate its beauty and ecological health. These five chapters make up the book's first section, a section about "values, perceptions, traditions, and cultural expectations." Agronomists will find the first two chapters particularly interesting because of the light they shed on debates about biotechnology, the environmental effects of agriculture, the proper structure of agriculture, and so many other knotty agricultural and rural issues. Agronomists involved in natural resource management will particularly enjoy Professor Nassauer's vision for agricultural landscapes.

The second section of the book includes six chapters devoted to views of "structural and policy changes." These chapters present visions for preserving farmland and improving environmental quality (Julia Freedgood); for agriculture on the fringes of metropolitan areas to improve local economies, link urban and rural communities, and preserve the landscape (Mark Lapping and Max Pfeffer); for promoting rural development by promoting agriculture (Karl Stauber); for creating "a better life for farm workers" (Suzanne Vaupel), for new approaches to farm support and food assistance policies (Beatrice Rogers); and for Federal agricultural policy (Kathleen Merrigan). Agronomists may be particularly interested in the chapters by Freedgood, and by Lapping and Pfeffer.

The final section of the book deals with "adaptations for changing conditions." Agricultural scientists working in research, extension, or education will find much to think about in the four chapters of this section. The first, by John Gerber, offers a vision for the future of land-grant universities and cooperative extension. This is followed by Robert Goodman's vision for the future of agricultural research, Lawrence Busch and Gerald Middendorf's view of how we determine the appropriateness of new agricultural technology, and finally, William Lacy's vision for higher agricultural education.

The weaknesses of *Visions of American Agriculture* are two. First, there are significant aspects of American agriculture—e.g., agribusiness and agricultural lending—from which authors were not recruited and for which there are no direct visions included. Second, for a book that repeatedly calls for inclusion, the cast of authors and the extent of their vision sometimes seems rather conservative. For example, the last section focuses on the USDA/land-grant complex saying little about non-land-grant and private teaching, research, and service organizations. Or for another example, the cast of authors includes academicians and administrators, who, though well qualified and broadly insightful, are not the front-line farmers, ranchers, farm workers, agronomists, food systems professionals, rural citizens, and others whom these visions would often most directly affect.

The strength of this book is that it brings together into one book a set of challenging and provocative ideas for the future of agriculture. It is important for people interested in agriculture to think and discuss its future. How can we build on a legacy of success and arrive at a good end, if we do not at some point agree on where we are and where we are going.

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The breadth and depth of genetic investigations have changed dramatically in the last 10-15 years in the wake of advances in DNA technology and decentralized computing power. Those changes have affected most of the biological sciences and may connect them in unimaginable ways. Today, scientists are challenged to review some long-standing approaches, dogma, and questions in the light of the technological changes and the opportunities they afford for investigation, learning, and progress. Such is the case for quantitative genetics, genetic mapping and the analysis of genetic factors affecting complex traits (i.e., quantitative trait loci or QTL), the focal points of this book.

The development of relatively comprehensive genetic maps based on DNA markers and statistical methods have been at the foundation of investigations that seek to locate, select, and sometimes clone the genes of the QTL. Those methods are described and illustrated by the 38 highly qualified authors of this book in its three parts: Fundamental Principles of Genetic Mapping with Molecular Markers and QTL Detection (12 chapters), Case Histories from Animal and Plant Research (7 chapters), and the Potential Social Impact of This Research in Agriculture and Medicine (2 chapters). The objectives of the book are to present concisely summarized versions of current methods, principles, and applications of QTL analysis to illustrate the effect of recent technological advances on our ability to assess and investigate aspects of genetics and to suggest research needs and direction stemming from those advances. The book is intended as an introductory survey of those methods and advances and is presented at a level suitable for graduate students and other senior scientists familiar with genetics and its role in basic and applied biological sciences.

The first section of the book comprises a complete spectrum of QTL analysis—molecular genetic tools, statistical and computational methods, considerations of population (e.g., inbred vs. outbred progeny) and genome structure (e.g., ploidy), and marker-assisted selection for cloning genes and breeding programs. Also, the section contains much information for accessing software, data bases, and electronic media. The majority of this section is devoted to statistical and genetic considerations and introductory reviews of methods and issues that are central and significant to QTL detection. Those subjects are complemented by chapters that illustrate some utili-