Contents

List of Figures xi
List of Tables xiii
Foreword xv
Preface xix
Acknowledgments xxi

Chapter 1. Toward a Dynamic Global Food System 1
Introduction 1
Toward a Global Food Systems Approach 3
The Global Food System 6
Complex Systems Analysis 11
Organizations That Impact the Food System 15
Emerging Trends and Driving Forces 16
Conclusion 24
Notes 25

Chapter 2. Food Policy 26
Introduction 26
Definition of Food Policy 29
Political Economics 33
Stakeholder Analysis 36
Food Policy in the Global Food System 38

How Do Governments Intervene? 42
Macroeconomic Policies and the Food System 43
A Political Economy Analysis of Food Policy 49
Conclusion 54
Notes 55

Chapter 3. Human Health and Nutrition Policies 56
Introduction 56
Dietary Energy and Nutrients 58
Other Food System Interactions with Human Health 63
Current World Health and Nutrition Situation 68
Nutrition Transition 71
Economic Payoffs from Health and Nutrition Improvements 74
Policy Options to Improve Health and Nutrition 75
Comparing Alternatives: An Example of Efforts to Reduce Dietary Iron Deficiency 83
Conclusion 85
Human Health and Nutrition Policies Case Studies 86
Notes 87

Chapter 4. Food Security, Consumption, and Demand Policies 88
Introduction 88
The Food Consumption Situation 90
Food Security: Millennium Development Goals and the World Food Summit 91
Household Choices: Coping and Adaptation 98
Population Growth and Demographic Transitions 100
Consumer and Household Demand Analysis 102
Food Consumption Analysis 107
Food Consumption Policies 109
Conclusion 113
Food Security, Consumption, and Demand Policies Case Studies 114
Notes 115

Chapter 5. Poverty Alleviation Policies 116
Introduction 116
World Poverty Situation 118

Who Stays Poor? 126
Conceptual Issues of Multidimensional Poverty 133
Poverty and the Food System 136
Poverty Reduction Policies 137
Conclusion: Reducing Poverty 141
Poverty Alleviation Policies Case Studies 143
Notes 143

Chapter 6. Domestic Market Policies 144
Introduction 144
A Marketing System 146
Introductory Theory of the Firm 148
Food Markets 155
Structural Change in Food Markets 157
Food Marketing Policies 163
Conclusion 170
Domestic Market Policies Case Studies 171
Notes 173

Chapter 7. Food Production and Supply Policies 174
Introduction 174
The Economic Importance of Agricultural Production 176
Food Production Situation 180
New Farming Techniques 188
Increasing Yields through Research and the Green Revolution 189
Smallholder Agriculture 192
Policies for Production and Supply 197
Contextual Policies 203
Conclusion 211
Food Production and Supply Policies Case Studies 214
Notes 215

Chapter 8. Climate Change, Energy, and Natural Resource Management Policies 216
Introduction 216
The Food System and Natural Resource Management 217
Environmental Externalities Related to the Food System 219

Climate Change and the Food System 228
Poverty, Hunger, and Sustainability Goals: Trade-Offs and Policy Implications 232
The Environmental Kuznets Curve and Full-Costing 234
Policy Options to Maintain Sustainable Use of Natural Resources 238
Conclusion 241
NRM Policies Case Studies 243
Notes 244

Chapter 9. Governance and Institutions 245
Introduction 245
Institutions in Economics 247
Governance Situation 249
Governance and the Food System 251
Recent Trends in Governance 265
International Governance 269
Conclusion 274
Governance and Institutions Case Studies 275
Notes 276

Chapter 10. Globalization and the Food System 278
Introduction 278
The International Food Trade Situation 283
The International Capital Market 289
International Technology Transfer 290
The Role of Biotechnology 292
The International Labor Market 296
Policies to Guide Globalization 298
Conclusion 300
Globalization and the Food System Case Studies 303
Notes 304

Chapter 11. Ethical Aspects of Food Systems 305
Introduction 305
Ethical Systems 306
Social Welfare Functions and Pareto Efficiency 312
Equity and Equality 315

Households and Other Actors 318
Poverty, Hunger, and Nutrition 319
Food Safety 322
Food Sovereignty 323
Markets and Morality 324
Animal Welfare and Environmental Ethics 326
Trade and Aid 328
Implicit Normativity in Research 330
Biotechnology 331
Conclusion 333
Ethical Aspects of Food Systems Case Studies 334
Notes 334

References 337
Index 385