Contents

Kenneth L. Robinson: An Acknowledgment ix
Preface to the Fifth Edition xi

1. Introduction 1
   Distinguishing Characteristics of Agricultural Prices 2
   Role of Prices 4
   Plan of Book 5

Part I. Principles of Price Determination 7

2. Demand for Agricultural Products 9
   Basics of Demand Theory 9
   Consumer and Market Demand 10
   Static and Dynamic Aspects of Demand 16
   Speculative Demand 24
   Derived Demand 26

3. Demand Elasticities and Related Coefficients 29
   Price Elasticity 29
   Income Elasticity 33
   Cross-Price Elasticity 35
   Relationships among Elasticities 37
   Price Flexibility Coefficients 45
   Empirical Elasticities 47

4. Supply Relationships in Agriculture 50
   Theoretical Basis of Supply Functions 50
   Price Elasticity of Supply 57
   Changes in Supply 59
Contents

Supply-Response Relation  68
Constraints on Supply Responses  68
Aggregate Farm Output  70
Concluding Remarks  71
Appendix: Product Prices, Factor Prices, and Factor Use  71

5. Price Determination: Theory and Practice  75
   Classification of Markets  75
   Price Determination under Pure Competition  78
   Price Determination under Monopoly  85
   Price Discrimination  87
   Price Behavior under Oligopoly  92
   Price Behavior under Monopolistic Competition  97
   Concluding Remarks  98
   Appendix: Price Discrimination  98

Part II. Price Differences and Variability  103

6. Marketing Margins  105
   Models of Margin Behavior  106
   Empirical Measures of Margins  113
   Incidence of Changes in Marketing Costs  117
   Price Transmission  118
   Market Structure and Margins  120
   Marketing Margins and Elasticities of Demand at Various
      Market Levels  125
   Concluding Remarks  128
   Appendix: Marketing Margin Model  129

7. Price Differences Associated with Quality  133
   Demand by Grades  134
   Supply by Grades  136
   Price Differences  137
   Defining Grades and Market Imperfections  140
   Price Discrimination and Government Programs  142

8. Spatial Price Relationships  145
   Background  145
   Price Relationships for Commodities Sold in One Central Market  148
   Market Boundaries  148
   Spatial Equilibrium Models  152
   Impact of Trade Barriers  156
   Empirical Applications  161
   Determining Transfer Costs  163
Contents

Observed versus Theoretical Price Differences: Are Spatial Markets Efficient? 164
Concluding Remarks 166

9. Price Variation through Time 168
Seasonal Variation in Prices 169
Annual Price Behavior 174
Cyclical Behavior 177
Cobweb Model 181
Trends 185
Short-Time Price Variation 187
Models of Time Series 190
Concluding Remarks 191
Appendix I: Simple Seasonal Model 191
Appendix II: An Elementary Cobweb Model 193

10. General Farm–Non-farm Price Relationships 197
Variables Influencing the General Level of Farm Prices 197
Measuring Changes in the General Level of Prices 203
The Terms of Trade of Farm Products 207
Concluding Remarks 211
Appendix: Price Indexes 211

Part III. Pricing Institutions 221

11. Mechanisms for Discovering Prices 223
Alternative Pricing Mechanisms 224
Economic Consequences of Price Discovery Arrangements 231
Government Intervention in Pricing Agricultural Products 237
Concluding Remarks 244

12. Price Relationships on Commodity Futures Markets 246
Markets for Contracts 246
Establishing Prices for Futures Contracts 251
Cash-Futures Price Relationships for Grains 256
Price Relationships for Livestock 265
Daily Price Changes 271
Prices of Options Contracts 274
Summary 278

13. Functions of Commodity Futures Markets 280
Hedging 280
Price Discovery 290
Summary 300
Appendix: Optimal Hedges 300
Part IV. Introduction to Empirical Price Analysis 305

14. Background for Price Analysis 307
   Alternative Models and Techniques 308
   Getting Started 314
   The Identification Problem 321
   A Recursive System 326
   Data Selection: The Sample 333
   Deflating 334
   Other Data Transformations 336
   Concluding Remarks 341
   Appendix: Modeling the Variance of Prices 342

15. Using and Evaluating Results 345
   Interpreting Estimated Parameters 345
   Model Adequacy 354
   Computing and Appraising Elasticities and Flexibilities 360
   Forecasting from Regression Equations 362
   Concluding Remarks 369
   Appendix: Appraising Turning-Point Errors 369

16. Applications 373
   Forecasting Basis Convergence 373
   Price Determination Equation 378
   Structural Models of the U.S. Dairy Sector 382
   Equilibrium Displacement Models 384
   Concluding Remarks 389

Index 391