Contents

Summary ........................................................................................................................................ iii
Introduction ...................................................................................................................................... 1
Characteristics of the Sugar Sector
  Structure of the U.S. Sugar Industry .......................................................................................... 1
  Production and Processing Costs and Returns ........................................................................... 11
  U.S. Sugar Prices and Consumption ........................................................................................... 14
  The World Sugar Market ............................................................................................................. 18
U.S. Sugar Policy ........................................................................................................................... 22
  Historical Perspective of U.S. Sugar Legislation ......................................................................... 22
  Other Legislative Authorities To Support the U.S. Sugar Industry ........................................... 25
  Sugar Legislation: 1985-Present .................................................................................................. 26
  Economic Effects of the Sugar Program ..................................................................................... 27
Effects of GATT and NAFTA on the Sugar Sector. ..................................................................... 30
  The Uruguay Round GATT Agreement .................................................................................... 30
Current U.S. Sugar Market Issues. ................................................................................................. 31
  Rising Beet Sugar Market Share ............................................................................................... 31
  Marketing Allotments .................................................................................................................. 32
  Import Quota Issues ................................................................................................................... 32
Policy Options and Alternatives. ................................................................................................... 32
  Policy Options Within Current Sugar Program Mechanisms .................................................. 32
  Deficiency Payment Program ...................................................................................................... 33
  Elimination of Domestic Program .............................................................................................. 34
  Further U.S. Sugar Policy Considerations .................................................................................. 34
Additional Readings ....................................................................................................................... 34
Glossary ......................................................................................................................................... 36
Appendix Tables ............................................................................................................................ 41

List of Tables

2. U.S. sugar beet processing companies ......................................................................................... 6
3. U.S. sugarcane farms and average acreage harvested, by State ................................................ 8
4. U.S. cane sugar refiners: Company, factory location, and capacity ......................................... 10
5. U.S. total consumption of caloric sweeteners, 1980-94 ............................................................ 17
6. World sugar supply, use, stocks-to-consumption ratio, and price ............................................. 19
7. World sugar trade, by leading sugar exporters and importers ....................................................... 21
8. U.S. national average cane and beet sugar loan rates ................................................................. 25

Appendix Tables

1. Sugar beets: Acreage harvested by region and State, crop year .................................................. 41
2. U.S. sugar beets and beet sugar: Acreage, production, yield, and recovery rate ........................ 42
4. U.S. cane sugar yield per acre ..................................................................................................... 44
5. U.S. cane sugar production by area ............................................................................................. 45
6. U.S. cane sugar recovery rates ................................................................................................... 46
7. U.S. sugarcane: Production for sugar by area ............................................................................ 47
8. U.S. sugarcane: Yield per harvested acre for sugar by area ..................................................... 48
9. Sugarcane processors: Company, factory location and capacity ............................................. 49
10. U.S. raw sugar prices, duty fee-paid, New York, monthly, quarterly, and fiscal and calendar years 50
11. U.S. wholesale refined beet sugar prices, Midwest markets, monthly, quarterly, and fiscal and calendar years 50
12. U.S. retail refined sugar prices, United States, monthly, quarterly, and by fiscal and calendar years 51
13. Cost of producing and processing beet sugar in the United States, 1981-92 crops ................ 52
14. Variable and fixed costs of producing and processing beet sugar in the United States, 1981-92 crops 52
15. Cost of producing and processing 96-degree raw cane sugar in the United States, 1981-92 crops 52
16. Variable and fixed costs of producing and processing raw cane sugar in the United States, 1981-92 crops 53
17. Beet sugar grower and processor costs and returns, refined basis 54
18. Cane sugar grower and processor costs and returns, 1981-92 54
19. Sugar beets: Average production costs per planted acre and net ton, by sugar beet region, 1992 crop 55
20. Beet sugar: Processing costs per pound of refined sugar and net ton of sugar beets, by cost item and area, 1992 crop 56
21. Sugar beets: Production and processing costs per net ton of sugar beets and pound of refined sugar, 1992 crop 57
22. Sugarcane: Average production costs per harvested acre, net ton of sugarcane and per pound of 96 degree raw sugar, by cost item and area, 1992 crop 58
23. Raw sugar: Processing costs per net ton of sugarcane and pound of 96-degree raw sugar, by cost item and area, 1992 crop 59
24. Sugarcane: Production and processing costs per ton of sugarcane and pound of 96-degree raw sugar, by cost item and area, 1992 crop 60
25. World raw sugar prices, monthly, quarterly, and fiscal and calendar years 61
26. World refined sugar prices, monthly, quarterly, and fiscal and calendar years 61
27. U.S. sugar imports under quota and tariff-rate quota, by country 62
28. U.S. sugar (including Puerto Rico) supply and use, fiscal years 65
29. U.S. high-fructose corn syrup (HFCS) supply and use, by calendar years 66
30. Sugar beet and sugarcane prices and crop values 67
31. Refined beet sugar loan rates, by regions 67
32. Raw cane sugar loan rates, by area 67
33. Gross returns, marketing expenses, and net return from beet sugar 68

List of Figures

1. U.S. sugar beet acreage harvested ....................................... 3
2. Sugar beet yield per acre ............................................. 3
3. Beet sugar per acre ................................................ 4
4. U.S. beet sugar production ........................................... 4
5. Beet sugar recovery per ton sugar beets .................................. 5
6. U.S. production of sugar from beet molasses desugarization ............... 5
7. U.S. sugar beet factories daily average slicing capacity .................... 6
8. U.S. cane sugar production ........................................... 7
9. U.S. sugarcane area harvested for sugar .................................... 7
10. U.S. cane sugar production, by State ...................................... 7
11. Sugarcane acreage harvested for sugar, by State .......................... 7
12. Cane sugar yield per acre, by State .................................... 8
13. U.S. sugarcane mills: Average daily grinding capacity ..................... 9
14. U.S. cane sugar refinery numbers and daily capacity .................... 11
15. Costs and returns for sugar beet growers .................................. 11
16. Costs and returns for beet processors ..................................... 12
17. Costs and returns for beet sugar .......................................... 12
18. Total economic cost of beet sugar, Eastern and Western United States . . 12
19. Costs and returns for sugarcane growers ..................................... 13
20. Costs and returns for cane processors ..................................... 13
21. Costs and returns for cane sugar ........................................ 14
22. Cost of production of U.S. beet and cane sugar .......................... 14
24. U.S. raw, wholesale and retail refined sugar prices, quarterly .......... 15
25. Margin between refined and raw sugar prices ................................ 16
26. U.S. sugar consumption .................................................... 16
27. U.S. consumption of domestic and imported sugar and HFCS .......... 17
28. World sugar production and consumption .................................. 18
29. Consumption in selected regions ........................................ 20
30. Production in selected countries ..................................... 20
31. Exports by selected countries .............................................. 22
32. U.S. and EU net imports as share of total world imports ................. 22
33. Variability of world prices for major commodities ........................ 23
34. World sugar price and stock/use ratio .................................... 23
35. Ratio of U.S. beet sugar loan rate to cane sugar loan rate .................... 28