

Index

- Aflatoxin, testing technologies for, 194, 195-196
- Africa
 U.S. wheat exports to, 35
 wheat consumption and import trends in, 93
 wheat preference shifts in, 95, 98
 see *also* Middle East, individual countries in
- Agricultural Market Act (AMA), 197
- Agricultural Research Service (ARS)–USDA, 119, 127
- Agricultural Stabilization and Conservation Service (ASCS)–USDA, 43
- Allowable Storage Time Table for corn, 180, 183
- American Association of Cereal Chemists, 191
- American Feed Manufacturers Association, 62
- American Oil Chemists' Society, 191
- American Seed Trade Association, 127
- Archway Cookies, Inc., 90
- Argentina
 dominant class of wheat exported by, 91
 drying practices in, 239, 241
 export standards used in, 207
 grain storage practices in, 239, 241
 pricing policy of, 244
 seed variety control in, 244
- Asgrow Seed Co., 119
- Asia
 end-product preferences of consumers in, 91
 wheat preference shifts in, 95, 98
 wheat types preferred by countries in, 92-93
 see *also* Far East; individual countries in
- Associação Nacional dos Exportadores de Cereais (Brazil), 244
- Association of American Feed Control Officials, 48
- Australia
 dominant type of wheat exported by, 91
 drying practices in, 239, 241
 FAQ standard use in, 207
 grain market regulation in, 5, 19, 246
 grain storage practices in, 239, 241
 marketing by variety in, 244
 pricing policy of, 244-245
 seed variety control in, 241, 247, 259
 uniformity in grain quality between shipments from, 15, 89
- Australian Wheat Board (AWB), 239
- Barges. See Transportation
- Bean degermer, 54
- Biochemical selection, in wheat breeding, 113
- Biotechnology, use in grain breeding of, 111-112, 113, 122, 123, 129-130
- Blending
 major grain exporting competitors' use of, 241
 necessity in the United States caused by lack of uniformity in marketing process, 189, 248
 reasons for, 175
 technology types and performance for, 175-179
 wheats for various end uses, 15, 68-69, 70, 93, 176
- Brazil
 cleaning practices in, 239
 domestic wheat production's relationship to income in, 94
 drying practices in, 239
 export standards used in, 207
 grain inspection authority and grade standards of, 244
 grain storage practices in, 239, 241
 pricing policy of, 244-245
 seed variety control in, 244
- Breakage, interaction between moisture and, 7, 8, 11, 141, 144, 146, 154, 179-183
- Breeders, role of public and private grain, 106-108, 118-122, 127-128
- Breeding. See Genetic selection
- Broken corn and foreign material (BCFM), 203, 204, 205, 211, 213
- Canada
 cleaning practices in, 239, 241, 247
 dominant type of wheat exported by, 91
 FAQ standard use in, 207
 grain market regulation in, 5, 19
 grain transport to, 36, 38, 165, 191
 pricing policy of, 94, 244-245
 seed variety control in, 241, 259
 soybean cultivars release in, 120
 storage incentives in, 246
 uniformity in grain quality between shipments from, 15, 89
- Chicago Board of Trade, hedging grain purchases and sales through, 41
- China, People's Republic of, corn grades in, 206
- Clark, Paul, 90
- Cleaning, grain
 technologies of major grain exporting competitors, 239, 241, 247
 technology types and performance for, 9-10, 171-175
 use in grain processing, 51, 54, 57
- Colorado, wheat production in, 32, 105
- Columbia River, 167
- Combines. See Harvesting, Technologies
- Commodity Credit Corporation (CCC)–USDA
 grain storage agreements made by, 228, 261-262
 inspection policies of, 228-232
 loan program workings and objectives of, 14, 42, 221-224, 254
 pilot project on premiums and discounts of, 234
 policy options regarding loans made by and grains owned by, 21-22, 254, 261
- Competition
 comparison of U.S. grain quality affecting institutions and regulations to major grain exporting, 241-244, 246-247

- grain quality attributes important in processing, 13, 14-15, 63, 66, 67-68, 80-82, 84
- marketing system principles and characteristics of U.S. grain, 4, 40-41
- production characteristics and trends in U.S. grain, 29, 31-33
- quality control standards and methods for U.S. grain, 42-43
- soybean processing, 50
- storage and handling practices by U.S. grain, 38-39
- technologies used in grain processing, 50-57
- utilization of grains produced by U.S. grain, 33-35, 92-94
- Insect management, technology types and performance for, 10, 11, 158-165
- Inspection. See Regulation; Technologies; Testing
- International U.S. Wheat End Use Quality Conference (1986), 79, 82
- Interrelationship
- between grain handling and storage technologies, 39
 - between standards, variety, and market, 16, 23, 256-257, 266-267
 - between technologies as related to grain quality, 3, 14, 15, 43, 61, 71-72, 84, 90, 182-183
 - between technologies regarding moisture and breakage, 7, 10, 12, 141, 144, 146, 154, 179-182
 - between yield and protein, 232-234
 - of environment and genetic variation in grain breeding, 105-106, 116-118, 126
 - of field performance criteria for corn, 129
 - of quality, disease resistance, and yield in grain breeding, 104-105, 116
 - of yield, protein, and oil content in soybean breeding, 114, 116
- Iowa
- corn production by, 32
 - hybrid seed sales in, 127
 - soybean production in, 33, 114
- Israel, U.S. soybean exports to, 35
- Japan
- grain transportation to, 170
 - U.S. grain exports to, 35, 115
 - wheat consumption and import trends in, 93
 - wheat type preference shift in, 95, 98
- Kansas
- farm programs' impact on grain marketing in, 227, 233
 - wheat production in, 32, 105
- Karl Fisher titration method, 193
- Laguio, Emma B., 79, 82
- Latin America
- wheat type preference shifts in, 98
 - see *also* individual countries in
- Legislation
- evaluation of recent grain quality, 212-213
 - see *also* individual statutes
- Licensing. See Regulation
- Livestock, production of feed for, 33, 34, 49-50, 94-95
- Loan rate program, premiums and discounts used in U.S. farm, 14, 42, 221-224
- Marketplace
- importance of supplying quality attributes in, 89-90
 - importance of uniform quality between grain shipments in, 14, 15, 79-81, 84
 - incentives in the grain, 203-204
 - quality attributes desired by purchasers of U.S. grain in, 14, 15-16, 67-84, 91-98
 - trends for wheat quality characteristics in the international, 93-98
- Merchants Exchange of St. Louis, 168
- Mexico
- export inspection exception for, 191
 - U.S. grain transport to, 38, 165
- Michigan, performance trial requirement in, 128-129
- Middle East
- end product preference of consumers in, 91, 98
 - grain attributes considered important by countries in, 72
 - U.S. grain exports to, 35
 - wheat consumption and import trends in, 93
 - see *also* individual countries in
- Milling, grain, 33, 34, 47-49, 50-51, 54-57
- Minnesota, grain production in, 32, 33
- Mississippi, 115
- Mississippi River System, grain transport on, 167
- Missouri, soybean production in, 33
- Moisture
- interaction between breakage and, 7, 8, 11, 141, 144, 146, 154, 179-183
 - levels in grain processing, 51, 54-55, 57
 - see *also* Drying; Grain
- Montana, wheat production in, 32
- Nagao, Seiichi, 79
- National Association of State Universities and Land Grant Colleges, 128
- National Bureau of Standards. See National Institute of Standards and Technology
- National Conference of Weights and Measures, 191
- National Corn Growers Association, 151
- National Grain and Feed Association, 43, 154, 209
- National Grain and Feed Dealers Association, 200
- National Institute of Standards and Technology (NIST)–Department of Commerce
- policy options involving testing responsibility of, 23-24, 26, 265-266
 - weights and measures program coordination by, 191-192
- National Seed Storage Laboratory, Germplasm Bank, 107
- National Soybean Processor Association, 62
- Near-infrared-reflectance analyzers (NIR), 109, 192, 193, 196, 265
- Nebraska
- corn production in, 32

- Federal Food, Drug, and Cosmetic Act (FDCA), grain guidelines of, 197
- Federal Grain Inspection Service (FGIS)
 grain standards developed by, 42
 inspection and related regulation duties of, 13, 43, 189, 190-191, 192, 193, 196-197, 199, 201-202, 203, 204, 209, 212, 228
 policy options involving standards set by, 23-24, 263, 264, 265
- Federal Seed Act (1939), 121, 127
- Feed, animal, grain used for, 33, 34, 49-50, 94-95
- Flour
 production in grain milling, 33, 47-48, 51-53, 68-69
 quality and baking technologies, 14, 15, 61, 71-72, 90
- Food and Drug Administration (FDA)
 aflatoxin guidelines set by, 194, 197-199
 defect action limit for wheat of, 264
- Food Security Act (1985), 3, 43, 220
- France
 cleaning practices in, 239
 dominant type of wheat exported by, 91
 drying practices in, 239
 grain inspection authority and grade standards of, 244
 grain market regulation in, 5, 19, 241, 244-245, 247, 259
 grain storage practices in, 239, 241
 marketing by variety in, 244
 pricing policy of, 244-245
 seed variety control in, 241, 247, 259
 wheat productivity growth in, 4
- Fumigation. See Pesticides
- Funding. See Economics
- Genetic engineering, See Biotechnology
- Genetic selection
 influence on grain quality characteristics of, 104-106, 115-118, 125-127, 130
 objectives for grain, 103-104, 114-115, 123-125, 130
 variability of grain trait expression using, 105-106, 116-118, 125-127, 130
 see **also** Technologies
- Genotypes. See Environment; Genetic selection
- Gluten
 content of wheat, 33, 61, 71
 production in grain processing, 47, 48, 53-54, 55, 57
- Grading. See Standards; Testing; Variety
- Grain
 applying economic criteria to standards for U. S., 209-211
 blending technologies, 175-179
 case study in wheat illustrating changing nature of markets for, 91-98
 cleaning technologies, 9-10, 171-175
 drying technologies, 8, 143-151, 239, 241
 evaluation of standards for U. S., 200-209
 export trends and markets for the United States, 30-31, 35
 farm policy programs and objectives for U. S., 14, 42, 219, 221, 228, 244, 246, 253-254
 flow system in the United States, 36-38
 harvesting technologies, 9-10, 137-143
 insect management technologies, 10, 158-165
 inspection and testing procedures in the United States, 189-199
 marketing system principles and characteristics in the United States, 4, 40-41
 production characteristics and trends in the United States, 29, 31-33
 quality measurement and standards for, 12-13, 42-43, 62-67, 84
 storage and handling technologies, 9-10, 11, 38-39, 151-158, 239, 241, 247-248
 transportation techniques, 165-171
 utilization of U.S.-produced, 33-35, 92-94
 see **also** Corn; Soybeans; Wheat
- Grain and Feed Trade Association (GAFTA), 207
- Grain Quality Improvement Act (1986), 30, 137, 171
 evaluation of, 212-213
 objectives of grain standards specified by, 202, 209-210, 212
- Grain Trade Rules, 43
- Greece, 94
- Guidelines. See Standards
- Handling, grain
 technologies of major grain exporting competitors, 239, 241, 247-248
 U.S. technology types and techniques for, 9-10, 151-152
- Harvesting, grain, technology types and performance for, 9-10, 137-143
- Hatch Act, 119
- Hedging, use by U.S. grain trade players, 41
- Hybrids, development and performance of grain, 110-111, 123-126, 129
- Illinois, grain production in, 32, 33
- Illinois, University of, 128
- Imports. See Trade
- Incentives
 grain standards provision of market, 203-204
 for on-farm storage, 246
 provided by the Common Agricultural Policy of the EC, 237
 for quality characteristics in U.S. grain marketing system, 5, 40
 v. prohibitions as solution to grain standards problems, 212-213
- India, U.S. wheat exports to, 35
- Indiana
 corn production in, 32
 soybean production in, 33, 114
- Industry
 animal feed manufacturing, 49-50, 94-95
 export trends and markets of U.S. grain, 30-31, 35
 farm policy programs and objectives for U.S. grain, 14, 42, 219, 221, 228, 244, 246, 253-254
 flow system of U.S. grain, 36-38
 grain milling, 47-49

- grain quality attributes important in processing, 13, 14-15, 63, 66, 67-68, 80-82, 84
- marketing system principles and characteristics of U.S. grain, 4, 40-41
- production characteristics and trends in U.S. grain, 29, 31-33
- quality control standards and methods for U.S. grain, 42-43
- soybean processing, 50
- storage and handling practices by U.S. grain, 38-39
- technologies used in grain processing, 50-57
- utilization of grains produced by U.S. grain, 33-35, 92-94
- Insect management, technology types and performance for, 10, 11, 158-165
- Inspection. See Regulation; Technologies; Testing
- International U.S. Wheat End Use Quality Conference (1986), 79, 82
- Interrelationship
- between grain handling and storage technologies, 39
 - between standards, variety, and market, 16, 23, 256-257, 266-267
 - between technologies as related to grain quality, 3, 14, 15, 43, 61, 71-72, 84, 90, 182-183
 - between technologies regarding moisture and breakage, 7, 10, 12, 141, 144, 146, 154, 179-182
 - between yield and protein, 232-234
 - of environment and genetic variation in grain breeding, 105-106, 116-118, 126
 - of field performance criteria for corn, 129
 - of quality, disease resistance, and yield in grain breeding, 104-105, 116
 - of yield, protein, and oil content in soybean breeding, 114, 116
- Iowa
- corn production by, 32
 - hybrid seed sales in, 127
 - soybean production in, 33, 114
- Israel, U.S. soybean exports to, 35
- Japan
- grain transportation to, 170
 - U.S. grain exports to, 35, 115
 - wheat consumption and import trends in, 93
 - wheat type preference shift in, 95, 98
- Kansas
- farm programs' impact on grain marketing in, 227, 233
 - wheat production in, 32, 105
- Karl Fisher titration method, 193
- Laguio, Emma B., 79, 82
- Latin America
- wheat type preference shifts in, 98
 - see *also* individual countries in
- Legislation
- evaluation of recent grain quality, 212-213
 - see *also* individual statutes
- Licensing. See Regulation
- Livestock, production of feed for, 33, 34, 49-50, 94-95
- Loan rate program, premiums and discounts used in U.S. farm, 14, 42, 221-224
- Marketplace
- importance of supplying quality attributes in, 89-90
 - importance of uniform quality between grain shipments in, 14, 15, 79-81, 84
 - incentives in the grain, 203-204
 - quality attributes desired by purchasers of U.S. grain in, 14, 15-16, 67-84, 91-98
 - trends for wheat quality characteristics in the international, 93-98
- Merchants Exchange of St. Louis, 168
- Mexico
- export inspection exception for, 191
 - U.S. grain transport to, 38, 165
- Michigan, performance trial requirement in, 128-129
- Middle East
- end product preference of consumers in, 91, 98
 - grain attributes considered important by countries in, 72
 - U.S. grain exports to, 35
 - wheat consumption and import trends in, 93
 - see *also* individual countries in
- Milling, grain, 33, 34, 47-49, 50-51, 54-57
- Minnesota, grain production in, 32, 33
- Mississippi, 115
- Mississippi River System, grain transport on, 167
- Missouri, soybean production in, 33
- Moisture
- interaction between breakage and, 7, 8, 11, 141, 144, 146, 154, 179-183
 - levels in grain processing, 51, 54-55, 57
 - see *also* Drying; Grain
- Montana, wheat production in, 32
- Nagao, Seiichi, 79
- National Association of State Universities and Land Grant Colleges, 128
- National Bureau of Standards. See National Institute of Standards and Technology
- National Conference of Weights and Measures, 191
- National Corn Growers Association, 151
- National Grain and Feed Association, 43, 154, 209
- National Grain and Feed Dealers Association, 200
- National Institute of Standards and Technology (NIST)–Department of Commerce
- policy options involving testing responsibility of, 23-24, 26, 265-266
 - weights and measures program coordination by, 191-192
- National Seed Storage Laboratory, Germplasm Bank, 107
- National Soybean Processor Association, 62
- Near-infrared-reflectance analyzers (NIR), 109, 192, 193, 196, 265
- Nebraska
- corn production in, 32

- soybean research funding in, 120
- wheat production in, 32
- New York State, corn production in, 33
- North America, See individual countries in
- North American Export Grain Association, Inc. (NAEGA), 41, 201
- North Carolina
 - soybean cultivars in, 115
 - variety release in, 120, 121
- North Dakota
 - corn production in, 33
 - farm programs' impact on grain marketing in, 223, 227, 233
 - wheat breeding in, 104, 110
 - wheat production in, 32
- North Dakota State University, 174
- Occupational Safety and Health Administration (OSHA), 197
- Official United States Standards for Grain, 61, 172, 173
- Ohio
 - corn production in, 33
 - soybean breeding research budget in, 120
 - soybean production in, 33
- Oklahoma, wheat production in, 32, 105
- Paddock, Senator, 200
- Pakistan, 94
- Pesticides
 - used as grain protestants, 159-160
 - used for fumigation, 159, 160-162
- Pioneer Hi-Bred International, Inc., Plant Breeding Research Forum sponsored by, 118-119
- Plant Variety Protection Act (1970)
 - breeding stimulus of, 106, 118, 120
 - cultivar release procedures and, 121
- Policy
 - comparison of U.S. and competitor grain exporters' grain quality affecting, 244-246
 - government grain storage, 228-232
 - grain quality affected by U.S. Government farm, 219-233
 - impacts on quality of U.S. farm, 14, 219-234, 253-254
 - of major U.S. competitors, 5, 241-246, 254
 - options for Congress to enhance U.S. grain quality, 14-25, 254-267
 - programs and objectives of U.S. Government farm, 14, 42, 219, 221, 228, 244, 246, 253-254
 - U.S. grain inspection, 4-5, 43, 189-190
 - variety release, 121-122, 128-129
- Premiums. See Deficiency payment/target price program; Economics; Incentives; Loan rate program
- Pricing. See Economics
- Productivity. See Yield
- Protein
 - as ultimate test for wheat quality, 68
 - demand shift to wheats with lower content of, 93, 95-98
 - increase in implicit value of wheat's content of, 94
 - production trade-off between yield and, 232-234
 - quantity and quality importance in wheat's end-use suitability, 15, 91, 92, 93
- Quality attributes
 - congressional policy options to enhance grain, 16-26, 254-267
 - debate over U.S. grain, 3, 43
 - factors influencing the demand for differing wheat, 93-98
 - grain processing industries' perception of decrease in, 81-82
 - grain processing technologies' relationship to, 13, 14-15, 61, 71-72, 84, 90, 182-183
 - harvesting technologies' effects on, 141-143
 - impacts of markets, farm programs, and technology on, 232-233, 234
 - inverse relationship between yield and, 104-105, 116, 126-127, 130
 - marketing decisions based on the market for, 5, 40
 - required by end users of corn, 13, 16, 72-78
 - required by end users of soybeans, 13, 14, 78
 - required by end users of wheat, 13, 15, 68-72
 - storage technologies' effects on, 153-158
 - types of grain, 3, 44
 - uniformity of, between shipments of grain, 14, 15, 79-81, 84
 - U.S. awareness of various industries' requirements regarding, 13, 14, 89, 90
 - U.S. farm policies' impacts on, 14, 219-234, 253-254
- Railroads. See Transportation
- Regulation
 - comparison of U.S. and competitor grain exporters' grain quality affecting institutions and, 5, 241-244, 246-247
 - congressional policy options related to market, 19-22, 254-256, 259-263
 - see *also* Policy; Standards; Testing
- Research
 - on differing wheat consumption patterns in developing and industrial countries, 93
 - on factors determining grain storability, 202-203
 - on grain breakage, 10, 182
 - grain breeding, 109-110, 111-112, 113, 118-119, 120, 126-128
- Ships. See Transportation
- Snake River, 167
- South Africa, export standards used in, 207
- South America
 - grain attributes considered important by countries in, 72
 - see *also* individual countries in
- South Dakota, wheat production in, 32
- South Korea
 - grain transport and, 170
 - U.S. grain exports to, 35
- Soybeans
 - adequacy of standards for, 66-67

- breeders' influence on development of, 118-122
 genetic influences on quality characteristics of, 115-118
 genetic selection objectives for, 114-115, 130
 historical development of, 114
 processing of, 50, 57
 production areas and trends for the United States, 33
 quality attributes required by end users for, 13, 14, 78
 technologies used in breeding, 122-123
 variety release procedures and development time for, 120-122, 130
 see *also* Grain
- Spring Wheat Quality Advisory Committee (SWQAC), 107
- Standards
 adequacy of U.S. grain, 3, 43, 63-67
 alternatives to present system of U.S. grain, 205-209
 congressional policy options related to grain, 21-23, 263-266
 economic criteria applied to U.S. grain, 209-211
 economic solutions to problems with U.S. grain, 212-213
 establishing U.S. grain, 196-199
 evaluating U.S. grain, 200-209
 FDA grain quality, 194, 197-199
 FGIS grain, 42
 history of U.S. grain, 200-201
 integrating objectives of U.S. grain, 204-205
 major grain exporting competitors' inspection authority and grade, 244
 major grain exporting competitors' use of grain receival, 244, 247
 objectives of U.S. grain, 201-204
 Official U.S. Grain, 61, 62, 172, 173
 see *also* Quality attributes; Testing
- State Agricultural Experimental Stations (SAES)
 grain breeding by, 110, 120
 grain breeding programs funding by, 106, 127
 variety release procedures by, 7, 121
- Storage
 factors determining quality maintenance for grain in, 202-203
 government policies for grain, 228-232
 technologies of major grain exporting competitors, 239, 241, 247-248
 U.S. technology types and techniques for, 9-10, 11, 38-39, 151, 152-158
- Subsidies. See Incentives
- Sweden, 94
- Taiwan
 grain transportation, 170
 U.S. soybean exports to, 35
- Target price/deficiency payment program, effects on grain quality of, 42, 219, 220, 225, 228, 232-233, 234
- Technologies
 comparison of U.S. and competitor grain exporters' handling practices and, 239-241, 247
 flour quality and baking, 14-15, 61, 71-72, 90
 grain breeding, 108-113, 122-123, 129-130
 grain quality attributes and processing, 13, 14-15, 61, 84, 90, 182-183
 grain storage, 38-39
 grain testing, 191-196
 industry acceptance of traditional quality measuring, 15, 89-90
 interaction between moisture and breakage relating to, 179-183
 types and performance of blending, 171, 175-179
 types and performance of cleaning, 9-10, 171-175
 types and performance of drying, 8, 143-151
 types and performance of harvesting, 9-10, 137-143
 types and performance of insect management, 10, 11, 158-165
 types and performance of transportation, 165-171
 types and techniques of storage and handling, 9-10, 11, 38-39, 151-158, 239, 241, 247-248
 used by grain processing industries, 50-57
- Tempering, 51, 54
- Testing
 gene identification, 112-113
 importance to grain processing industries of various types of quality, 13, 15, 63, 66, 69, 72, 76-78, 80-82
 industry acceptance of traditional quality measuring, 15, 89-90
 and inspection of U.S. grain, 189-199
 technologies, 191-196
 see *also* Quality attributes; Standards
- Texas
 soybean breeding in, 114
 wheat production in, 32
- Trade
 consumer end-product preferences effect on grain, 91-93
 economics of grain, 41
 grain inspection in export, 190-191
 grain standards' facilitation of, 202
 importance of uniform quality between shipments in grain, 14, 15, 79-81, 84
 quality attributes desired by buyers in U.S. grain, 14, 15, 67-84
 standards and quality factors specified in contracts in U.S. grain, 16, 64, 65, 66, 67, 72, 78, 84
 trends in and dependence on U.S. grain export, 30-31, 33, 34, 35
 see *also* Marketplace
- Traits. See Breeders; Genetic selection
- Transportation
 insect management and, 163
 modes of major grain exporting competitors, 239-241
 U.S. technology techniques and performance for, 36-38, 165-171, 191
- Trucks. See Transportation
- Uniform Grain Storage Agreement (UGSA), 43, 228, 230
- Union of Soviet Socialist Republics (U.S.S.R.), U.S. grain exports to, 35
- United Kingdom (U. K.)

- Variable Import Levy on dockage imposed in, 255
wheat types imported by, 93
- United States (U. S.)
aspiration cleaning equipment in, 175
awareness of quality requirements of various
processing industries by, 13, 14, 89, 90
corn dry mills in, 49
corn yield, trend in, 124, 129
economic criteria applied to grain standards of,
209-211
evaluating grain standards of, 200-209
export trends and markets, 30-31, 35
farm policies' impact on grain quality, 14, 42,
219-234, 253-254
fundamental advantages in grain system of, 4-5,
251-252
government grain storage policies in, 228-232
grain export capability of, 165
grain flow system in, 36-38
grain inspection and testing in, 189-199
grain quality affecting institutions and regulations
of competitors compared to, 241-244, 246-247
grain quality affecting policies of competitors
compared to, 244-246
grain quality control standards and methods of,
42-43
handling technologies and practices of competitors
compared to, 239-241, 247
marketing system principles and characteristics in,
4, 40-41
problem areas in grain system of, 5-14, 252-254
production characteristics and trends, 29, 31-33
soybean cultivars release and lifetime in, 119, 120
storage and handling practices in, 38-39
utilization of grain produced in, 33-35, 94
variety of wheats grown and exported by, 91, 93
- United States Grain Standards Act (USGSA)—1916
amendment to, 234
grain regulation standards and responsibility
established by, 13, 42, 189, 190, 191, 196-197,
200, 201, 210
policy options involving inspection under, 24, 25,
263, 264-266, 268
- United States warehouse Act, 43
- U.S. Wheat Associates, 62
- Utilization
quality attributes and local consumer wheat, 89,
91-93
of U.S.-grown corn, 33-34
of U.S.-grown soybeans, 34-35
of U.S.-grown wheat, 33, 92-94
- Variety
control in major grain exporting competitors, 241,
247
development time for release of new grain, 109-110,
122, 130
farm programs' impact on selection of, 225-228
major grain exporting competitors' marketing by,
244, 247
of U.S.-produced wheat, 32, 64
Variety Release Committee (VRC), 107
Variety release procedures
congressional policy options related to, 17-19,
258-259
for grain, 106-108, 120-122, 128-129, 130
Virginia, 115
- Western Europe
U.S. grain exports to, 35
wheat consumption and import trends in, 93
wheat preference shifts in, 95, 98
see also Europe; European Community; individual
countries in
- Western Hemisphere
U.S. grain exports to countries in, 35
see also individual countries
- Wheat
adequacy of standards for, 63-64
breeders' influence on development of, 106-108
case study illustrating the changing nature of grain
markets, 91-98
factors causing variations in characteristics of, 91
genetic influences on quality characteristics of,
104-106
genetic selection objectives for, 103-104, 130
historical development of, 103
milling processes, 33, 50, 51-54
production areas and trends for U. S., 31-32
quality attributes required by end users for, 13, 15,
68-72
technologies used in breeding, 108-113
trends and shifts in preferences for classes of,
95-98
variety release procedures for, 106-108, 130
see **also** Grain
- Yield
influence on wheat class imports of domestic
wheat, 93, 95
interactions in grain breeding of quality, disease
resistance and, 104-105, 116, 126-127, 130
as number one criteria in corn field performance,
129
production trade-off between protein and, 232-234
U.S. corn, 124, 129