

# Industry & Trade Summary

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Poultry

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U.S. International Trade Commission  
Washington, DC 20436



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# PREFACE

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In 1991 the United States International Trade Commission initiated its current *Industry and Trade Summary* series of informational reports on the thousands of products imported into, and exported from, the United States. Each summary addresses a different commodity/industry and contains information on product uses, U.S. and foreign producers, and customs treatment. Also included is an analysis of the basic factors affecting trends in consumption, production, and trade of the commodity, as well as those bearing on the competitiveness of U.S. industries in domestic and foreign markets.<sup>1</sup>

This report on poultry covers the period 1993 through 1997. Listed below are the individual summary reports published to date on the agricultural and forest products sector.

## *USITC*

<i>publication number</i>	<i>Publication date</i>	<i>Title</i>
2459	November 1991 . . . . .	Live Sheep and Meat of Sheep
2462	November 1991 . . . . .	Cigarettes
2477	January 1992 . . . . .	Dairy Produce
2478	January 1992 . . . . .	Oilseeds
2511	March 1992 . . . . .	Live Swine and Fresh, Chilled, or Frozen . . . . . Pork
2520	June 1992 . . . . .	Poultry
2524	August 1992 . . . . .	Fresh or Frozen Fish
2545	November 1992 . . . . .	Natural Sweeteners
2551	November 1992 . . . . .	Newsprint
2612	March 1993 . . . . .	Wood Pulp and Waste Paper
2615	March 1993 . . . . .	Citrus Fruit
2625	April 1993 . . . . .	Live Cattle and Fresh, Chilled, or Frozen . . . . . Beef and Veal
2631	May 1993 . . . . .	Animal and Vegetable Fats and Oils
2635	May 1993 . . . . .	Cocoa, Chocolate, and Confectionery
2636	May 1993 . . . . .	Olives
2639	June 1993 . . . . .	Wine and Certain Fermented Beverages
2693	October 1993 . . . . .	Printing and Writing Paper
2702	November 1993 . . . . .	Fur Goods
2726	January 1994 . . . . .	Furskins
2737	March 1994 . . . . .	Cut Flowers
2749	March 1994 . . . . .	Coffee and Tea
2762	April 1994 . . . . .	Paper Boxes and Bags
2865	April 1995 . . . . .	Malt Beverages

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<sup>1</sup> The information and analysis provided in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under statutory authority covering the same or similar subject matter.

# PREFACE—*Continued*

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<i>USITC publication number</i>	<i>Publication date</i>	<i>Title</i>
2859	May 1995 .....	Seeds
2875	May 1995 .....	Certain Fresh Deciduous Fruits
2898	June 1995 .....	Certain Miscellaneous Vegetable ..... Substances
2917	October 1995 .....	Lumber, Flooring, and Siding
2918	August 1995 .....	Printed Matter
2928	November 1995 .....	Processed Vegetables
3015	February 1997 .....	Hides, Skins, and Leather
3020	March 1997 .....	Nonalcoholic Beverages
3022	April 1997 .....	Industrial Papers and Paperboards
3080	January 1998 .....	Dairy Products
3083	February 1998 .....	Canned Fish, Except Shellfish
3095	March 1998 .....	Milled Grains, Malts, and Starches
3096	April 1998 .....	Millwork

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## **ABBREVIATION and ACRONYMS**

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AI	Avian Influenza
APHIS	Animal and Plant Health Inspection Service of the U.S. Department of Agriculture
CAP	Common Agricultural Policy
CCC	Commodity Credit Corporation
CFTA	United States-Canada Free Trade Agreement
ECU	European Unit of Account
EEP	Export Enhancement Program
ERS	Economic Research Service of the U.S. Department of Agriculture
EU	European Union
FAS	Foreign Agricultural Service of the U.S. Department of Agriculture
FSIS	Food Safety Inspection Service of the U.S. Department of Agriculture
FSU	Former Soviet Union
HACCP	Hazard Analysis and Critical Control Point
HTS	Harmonized Tariff Schedule of the United States
MAP	Market Access Program
NASS	National Agricultural Statistical Service of the U.S. Department of Agriculture
SAGAR	Secretaria de Agricultura, Ganaderia Y Desarrollo Rural
SPS	Sanitary/Phytosanitary
TRQ	Tariff-Rate Quota
URA	Uruguay Round Agreement
USAEEC	USA Poultry and Egg Export Council
USDA	U.S. Department of Agriculture
WTO	World Trade Organization

# Abstract

This report addresses trade and industry conditions for the poultry industry for the period 1993-97.

- The United States is the world's leading producer and exporter of poultry. Between 1993 and 1997, the U.S. poultry industry expanded rapidly, largely owing to a boom in exports. During the period, exports more than doubled, averaging about 26 percent annual growth, compared with a 5 percent growth in annual production. Export growth likely will continue in the future. However, economic uncertainty in Asia and Russia (the major markets for U.S. product) makes the outlook somewhat uncertain. The United States also faces stiff competition in international markets from Brazil, Thailand, China, and the European Union.
- During 1993-97, the average annual value of U.S. live poultry and poultry meat shipments was about \$15 billion, while annual employment was approximately 230,000 persons. U.S. imports of poultry are negligible, at less than 0.5 percent of consumption. Endowed with a favorable climate, state-of-the-art production technology, and advantageous cost and market structures, the U.S. poultry industry is among the most efficient in the world. In 1997, 17 percent of production was exported, compared with only 8 percent in 1993. Principal markets included Russia, Hong Kong, Canada, Mexico, and Japan.
- World trade in poultry products is restricted as a result of both tariff and nontariff measures. For example, tariffs on U.S. product exported to Russia, Japan, and Canada are in excess of 20 percent, while nontariff barriers, such as sanitary certification, veterinary equivalence, and labeling requirements also represent major obstacles for U.S. exports.
- The principal U.S. consumers for poultry products include households, restaurants, institutions, and producers of further processed products (such as breaded chicken fillets and nuggets, and turkey franks). At the retail level, changes in consumer incomes and retail prices for poultry products relative to other meats are the principal factors influencing the demand for poultry products. Other factors affecting consumption include advertising, promotion, and concern about health and nutrition.



# I. INTRODUCTION

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This summary covers all commonly known poultry, including broilers, turkeys, spent laying hens, geese, ducks, and guinea fowl. Included are live birds provided for in chapter 1 of the Harmonized Tariff Schedule of the United States (HTS), as well as fresh, chilled, or frozen poultry (contained in HTS chapter 2), and processed or preserved poultry (contained in HTS chapter 16). Information is presented in this report on the structure of the U.S. and foreign poultry industries, domestic and foreign tariff and nontariff measures, and the competitive conditions of the U.S. poultry industry in domestic and foreign markets. The analysis covers the period 1993-97.

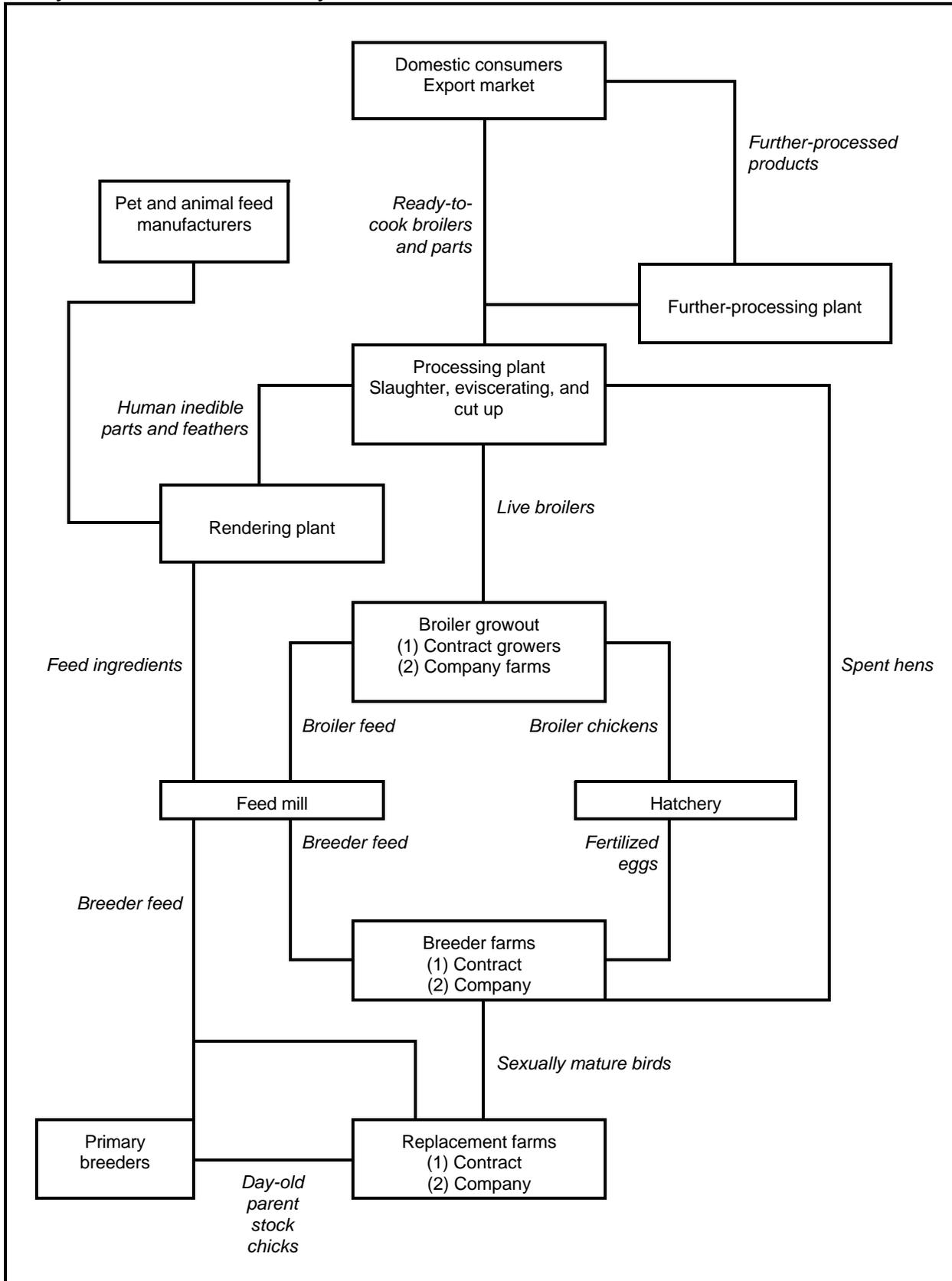
The poultry industry is made up of several distinct sectors. The primary poultry sectors are broilers and turkeys. Less significant sectors include spent laying hens, geese, and ducks. U.S. poultry production exceeded \$17.1 billion in 1997; broiler production totaled approximately \$14.1 billion; turkey production, about \$3.0 billion; and other poultry production, approximately \$300 million. U.S. poultry exports reached \$2.5 billion in 1997 (representing almost 15 percent of domestic production), more than double the \$1.2 billion exported in 1993. U.S. poultry imports amounted to \$43 million in 1997, representing less than 0.5 percent of domestic consumption. During 1993-97, total U.S. poultry consumption increased from \$11.8 billion to \$14.6 billion, while consumption grew on a per-capita basis from 87 pounds to 92 pounds (retail- weight basis) over the same 5-year period.

The production of poultry involves several distinct stages (figure 1). Primary breeders develop and reproduce strains of birds that have the genetic characteristics required by producers. Because producer requirements tend to change frequently, several diverse populations of chickens must be maintained to provide an adequate gene pool to meet future needs.<sup>1</sup> Replacement farms purchase and raise “parent stock” chicks (i.e., chicks which become the parents of commercial broilers). When replacement parent stock reaches the age of sexual maturity (approximately 18 weeks), the birds are moved to breeder farms for the production of fertile eggs from which to produce commercial broilers. Fertilized eggs are sent from the breeder farms to hatcheries, which are highly specialized facilities designed to hatch fertile eggs. Hatcheries must also be equipped to process the day-old chicks and to transport them to growout farms. Growout farms raise the newly hatched broiler chicks to market weight (typically 3 pounds live weight after about 40 days), generally using formulated feed produced by the broiler firm’s feed mill.

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<sup>1</sup> Charles F. Strong, Jr., “Vertical Integration in the Poultry Industry,” unpublished paper, University of Georgia, GA, undated.

**Figure 1**  
**Poultry: Structure of the U.S. industry**



Source: Adapted from Floyd A. Lasley and others, The U.S. Broiler Industry, USDA, ERS, Agricultural Economic Report No. 591, Nov. 1988, p. 19.

The processing plant receives and slaughters the broilers and prepares finished products. The plant may simply slaughter and eviscerate the birds, if whole carcasses are the final product, or may process specialized broiler parts. Increasingly product is sent to further-processing plants for processing into value-added products. A typical integrated broiler firm combines most of these components into one efficient operation. The major exception is primary breeding, which is highly specialized; most companies choose to purchase parent stock chicks rather than to develop their own strains. In the system there is one major input (feed) and one major output (product sold). In a modern vertically integrated broiler production complex, these are the only transactions that actually occur and all other steps involve merely an internal transfer of resources. The entire operation thus relies on only one profit center. The process is analogous to a single, large factory converting raw materials (feed) into a finished product for the consumer (poultry products).

Because of the huge investment required to build and maintain adequate growout facilities, it is common for broiler enterprises to contract with individual farmers to grow broilers. This concept usually applies to replacement and breeder farms as well. With contract production, the company controls live production via the contracts offered to the farmers without actually investing in poultry housing. In a typical broiler growout contract, the company agrees to provide the farmer with broiler chicks, feed, vaccines, medications and possibly other supplies, and to pay the farmer a pre-set price per pound live weight of broilers produced. In return the farmer agrees to provide housing, equipment, utilities, labor, litter material, waste disposal and other incidentals to grow the broilers. This system has evolved and been effective because it greatly reduces the capital investment necessary on the part of the broiler integrator, and provides some income stability while maintaining a sense of independence on the part of the farmer.

By far the most important input in poultry production is feed (mainly corn and soybeans) which typically account for over 60 percent of liveweight production costs.<sup>2</sup> The feed mill converts raw materials such as grain, soybeans meal, vitamins and minerals into finished feed according to formulas developed by poultry nutritionists. Feed mills must have the capability to make feeds of several different types to meet the differing nutritional requirements of replacement stock, breeders, and commercial broilers. Feed costs reflect ingredient prices for corn, soybean meal, and other feed ingredients. Other significant production costs include chick cost, veterinary expenses, labor, and packaging. Because the poultry production process is highly mechanized, capital (mainly depreciation and rent) is the major fixed cost of poultry production.

Poultry meat, the final end product of poultry production, is used principally as a major food item, usually the “main course” in a meal. Poultry meat is also used as an ingredient in sandwiches, salads, soups, and other food preparations. In recent years, the share of total poultry production that is utilized in further-processed food products has increased. The demand for these products, such as chicken and turkey frankfurters, lunchmeat, and breaded products, has increased in concert with the consumer demand for convenience. Restaurants have become major users of poultry meat, with about 22 percent of total domestic consumption, of which 12 percent is sold through fast-food establishments.

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<sup>2</sup> Lee A. Christensen, “Updating the ERS Broiler Cost and Return Estimates,” USDA, ERS, *Livestock and Poultry Situation and Outlook*, Nov. 1993, pp. 27-32.

There are no direct government programs that influence the production of poultry in the United States. Indirect programs that affect the sector include availability of loans at below-market rates, Federal and State inspection and research services, and special tax provisions. Major government regulation in the poultry industry is designed to ensure that poultry products used for human consumption are safe, wholesome, and accurately labeled. The Hazard Analysis and Critical Control Point (HACCP) System was introduced in 1996, aimed at prevention of poultry contamination by identifying and controlling points in the production and processing system that are prone to contamination hazards. U.S. poultry exports receive assistance through the Export Enhancement Program (EEP). However, the program has not been used much since 1995, and assisted exports through the program are minimal compared with commercial exports.

## II. U.S. INDUSTRY PROFILE

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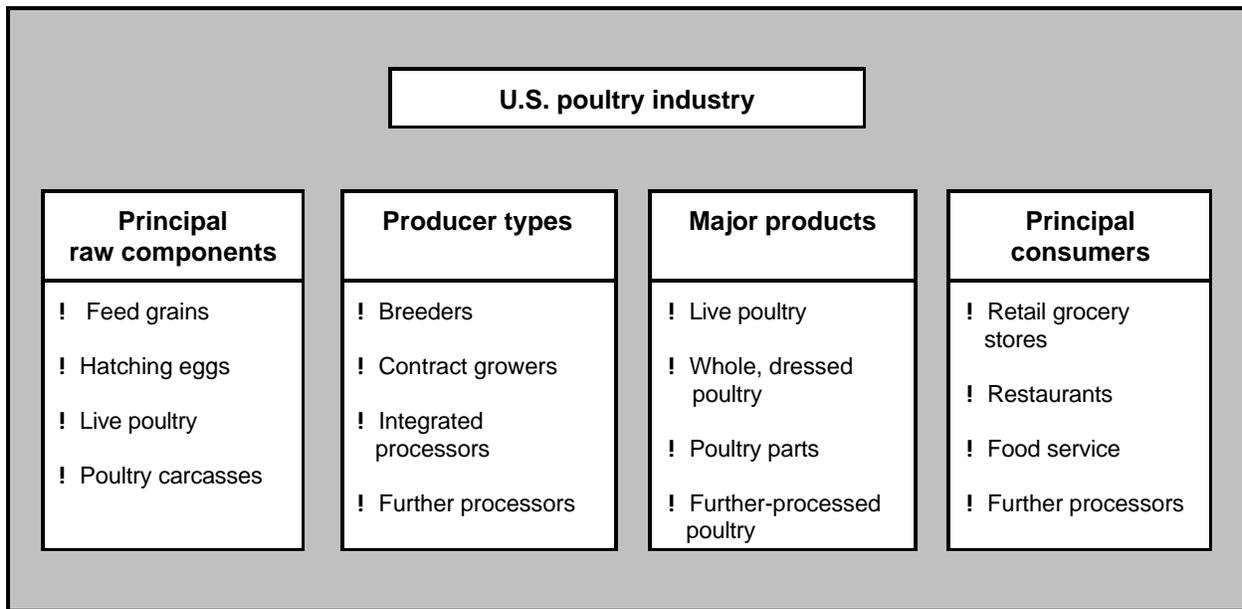
The U.S. poultry industry<sup>3</sup> is the largest in the world, and accounted for approximately 28 percent of global production in 1997. Endowed with a favorable climate, state-of-the-art production technology, and advantageous cost and market structures, the U.S. poultry industry is among the most efficient in the world. It has also pioneered many of the basic production methods currently in use throughout the world. The industry has experienced strong growth during the past 5 years, fueled by rising population and per-capita incomes in the domestic market, and more especially unprecedented growth in overseas markets.<sup>4</sup> Figure 2 provides a diagram of the general structure of the U.S. poultry industry, indicating the principal raw materials, producer types, major products, and principal consumers.

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<sup>3</sup> The U.S. poultry industry is covered under the following Standard Industrial Code (SIC) industry numbers: 0251 Broiler, Fryer, and Roaster Chickens; 0252 Chicken Eggs; 0253 Turkeys and Turkey Eggs; 0254 Poultry Hatcheries; 0259 Poultry and Eggs, Not Elsewhere Classified; 2015 Poultry Slaughtering and Processing; 5144 Poultry and Poultry Products (wholesale trade); and, 5149 Farm-Product Raw Materials, Not Elsewhere Classified. The poultry industry is also covered under the following North American Industry Classification System (NAICS) industry numbers: 11232 Broilers and Other Meat Type Chicken Production; 11233 Turkey Production; 11234 Poultry Hatcheries; and, 11239 Other Poultry Production.

<sup>4</sup> USDA, ERS, "Poultry Industry Boosted by Export Boom in 1990s," *Agricultural Outlook*, Nov. 1996, pp. 13-17.

**Figure 2**  
**U.S. poultry industry: Principal raw materials, producer types, major products, and principal consumers**



Source: Compiled by the staff of the U.S. International Trade Commission.

## Industry Structure

### *Number, Concentration, Geographic Distribution of Firms*

#### **Number**

Poultry production occurs at two levels, the farm level, where live birds are hatched and grown, and the processing level, where poultry meat is produced. The number of farms that reported sales of live poultry, by type, in 1987 and 1992 are reported in table A-1.<sup>5</sup> The total number of poultry farms decreased by 19 percent during 1987-92. The largest decline, 26 percent, occurred in the number of farms with sales of egg-type chickens (laying hens and pullets). This drop was precipitated mainly by a declining demand for eggs in the U.S. market. The relative modest decline in the number of farms selling meat-type chickens and turkeys was caused mainly by a long-term increase in industry concentration in the processing sector and a tendency toward fewer and larger farms to capture economies of size. The decline in the number of farms

<sup>5</sup> Data presented in table A-1 on the number of poultry farms are based on the 1992 Census of Agriculture. The most recent Census of Agriculture was conducted in 1997. However, data from this census likely will not be available before 1999.

selling ducks, geese, and guineas, a relatively minor poultry category in the U.S. market, mirrored the decline in demand for the meat of these poultry. According to industry sources, the reduction in number of poultry farms continued through 1997.<sup>6</sup> The number of poultry-processing firms totaled approximately 80 in 1997. These firms consist of approximately 40 integrated broiler processors, 30 turkey processors, and 10 processors of ducks, geese, and guineas. In addition, there are numerous processors that produce further-processed poultry items such as breaded chicken products for fast-food chain restaurants.

Most poultry processing occurs in plants that process poultry only. The number of Federally inspected plants that processed only poultry totaled 450 in 1997 (table A-2). Of these plants, 117 were involved in slaughtering, 168 in processing, and 165 in both slaughtering and processing. The number of Federally inspected poultry plants has remained fairly stable in recent years, following a period of rationalization caused by mergers and acquisitions, and a long-term trend toward larger plants. In addition to the plants that only process poultry, 3,526 plants processed both poultry and other meats (such as beef and pork) in 1997.

### **Concentration**

Concentration in the poultry industry, which experienced a tremendous long-term increase during the post-World War II period, remained relatively stable during the period under review (table A-3). In the broiler sector, concentration increased most among the top four firms, mainly as the result of merger and acquisition activities. In 1997, the top 4 broiler firms accounted for 44 percent of production, while the top 8 accounted for 62 percent, and the top 20 accounted for 85 percent. Concentration in the turkey sector was relatively stable during the period under review, with 41 percent of production undertaken by the top four firms, 65 percent of production by the top eight firms, and 96 percent of production by the top 20 firms.

### **Geographical Distribution of Firms**

The geographic distribution of the U.S. industry varies by sector. The broiler sector is concentrated in the Southeast region, which accounted for 46 percent of U.S. total commercial production in 1997 (table A-4 ). The second-leading region that year was the South Central region (20 percent). Industry concentration in these regions reflects relatively low land and labor costs, ample feed supplies, proximity to major metropolitan consumption centers, and the historical development in each region of a vertically integrated broiler production and support network. Inexpensive transport systems and availability of skilled labor are also important factors affecting poultry production in the South.<sup>7</sup> The turkey sector is less concentrated regionally than the broiler sector; turkey production occurs mainly in the West North Central (36 percent of total U.S. production) and South Atlantic (32 percent) regions. Regional concentration of turkey production is accounted for by the same factors as concentration of broiler production.

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<sup>6</sup> USITC telephone conversation with poultry industry representative, June 1998.

<sup>7</sup> "Regional Trends in Broiler Production," *Broiler Industry*, Mar. 1998, pp. 18-22.

The leading poultry-producing states are also shown in table A-4. Overall concentration of poultry production by state remained relatively stable during 1993-97; Arkansas, Georgia, and North Carolina were the top poultry producers. In 1995, Georgia replaced Arkansas as the nation's largest broiler-producing State, while Alabama was the third-largest producing State during the review period. States with the fastest growth rates of production during 1993-97 were Mississippi, Georgia, and Texas. Slower rates of growth were experienced in Delmarva Peninsula states, particularly Maryland, where growth was significantly below the national average. Slow growth in this region is attributed to land constraints and population pressures.<sup>8</sup> Turkey production is slightly more concentrated on the state level than is broiler production. Almost 19 percent of U.S. production is concentrated in North Carolina, although production in the State has stagnated over the past 5 years. Minnesota, with a 14-percent share of the nation's turkey production, experienced rapid growth in production between 1993-97, as did Missouri (the third-largest producing State). These production trends indicate a slow movement of the turkey industry away from the South Atlantic States toward the West North Central region of the country. Duck production is concentrated on Long Island and in the Midwest; goose production is concentrated in the Midwest.

### ***Employment, Earnings, and Productivity***

Employment in the poultry industry increased by 11 percent during 1993-97, reflecting the growth in production during the period (table A-5). In 1997, the total number of employees in poultry processing was about 241,000 of which 215,000 were production workers. The poultry industry is characterized by relatively low wages, mainly because of the location of most poultry-processing plants in rural, nonunion areas of the country, such as the South (primarily Arkansas and Georgia) and the upper Midwest (mainly Minnesota). The average hourly earnings in the poultry-processing industry in 1997 were \$8.37, compared with \$10.47 for meat processing and \$12.78 for all manufacturing (table A-5).<sup>9</sup> On average the weekly earnings of poultry-processing employees was \$318.24, considerably less than the \$438.09 for meat-processing workers, and \$531.65 for all manufacturing workers. Although poultry-processing plants employ relatively low-wage production-line labor, they also employ highly skilled scientific and technical staff in research and development activities associated with selective breeding, hatching, and optimal feed and growing conditions. Poultry processors employ highly skilled engineers to develop and maintain efficient processing operations and managers to compete in an increasingly competitive global market.

Measures of productivity in the poultry industry are the hatchability ratio, which measures the share of hatching eggs that are successfully hatched; the feed-conversion ratio, which measures the amount of feed required to produce one pound of meat; and the amount of time required to raise poultry to slaughter weight. The hatchability ratio for chickens has remained about 80 percent in recent years; this ratio is somewhat lower for turkeys and other types of poultry. The feed-conversion ratio generally is about 2:1 (i.e., 2 pounds of feed per pound of meat) for an

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<sup>8</sup> Ibid.

<sup>9</sup> American Meat Institute, *1997 Meat and Poultry Facts*, Washington, DC, p. 32.

efficient broiler operation, and about 3:1 for turkeys. This ratio is about 4:1 for hogs and 8:1 for cattle. The length of time required for broiler “grow out” declined from 14 weeks in 1940 to under 8 weeks today. The high levels of productivity are directly associated with the level of automation, which has risen dramatically since World War II, mainly because of technological innovations and increasing vertical integration in the industry. Hatcheries employ sophisticated incubating machinery, poultry growout operations are generally computerized and environmentally controlled, and poultry-processing plants use automated assembly-line processing and packaging lines.

### ***Special Considerations in Relation to Production Costs***

Feed is the most important cost component (about 60-70 percent in the United States) of poultry production. Feed costs depend largely on the prices of corn and soybean meal, the two major poultry feed ingredients. Between 1993 and 1997, there were sufficient supplies of these commodities on the domestic market to keep prices fairly stable, averaging about \$3 per bushel for corn, and \$175 per ton for soybean meal.<sup>10</sup> During 1993-97 there were no shortages of other inputs into poultry production, such as medicines, labor, machinery, and housing.

Special consideration in relation to production costs include water cost and availability, and the cost of complying with environmental regulations. Although large amounts of fresh water are needed for chicken and turkey houses, even larger amounts are required to operate processing facilities. It is estimated that plants use 5-6 gallons of water per bird for processing (cleaning and chilling of chickens), and for cleaning after processing is completed.<sup>11</sup> Availability and cost of water therefore are becoming an important factor for companies in deciding where to locate new processing operations.

Environmental compliance also affects the costs of producing and processing poultry in the United States.<sup>12</sup> Run-off from poultry farms and wastewater from processing facilities have been criticized for polluting rivers and lakes, as well as some coastal areas.<sup>13</sup> Regulations designed to reduce water pollution are reported to cost the poultry industry several billions of dollars annually.<sup>14</sup>

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<sup>10</sup> USDA, ERS, *Grain Outlook and Situation Report*, various issues.

<sup>11</sup> “Large Amounts of Water Used in Poultry Industry,” *Feedstuffs*, Vol. 70, No. 12, Mar. 23, 1998, p. 5.

<sup>12</sup> Tyson Foods agreed to pay \$6 million for fines and safety upgrades after allegations that a former Hudson Food plant in Berlin, Maryland—now owned by Tyson Foods—leaked bacteria-filled waste into a tributary of the Chincoteague Bay. Source: “Tyson Cleans Up Hudsons After Woes,” *The National Provisioner*, June 1998, pp. 10-11.

<sup>13</sup> “Poultry Partners Formed to Counteract Criticism of Poultry Industry,” *Feedstuffs*, Vol 70, No. 21, May 25, 1998, p. 23.

<sup>14</sup> USITC staff interview with poultry industry representative, July 1, 1998.

## ***Vertical and Horizontal Integration***

Vertical integration of the poultry industry—whereby many of the processing firms own or contract for the factors of production, but undertake much of the product distribution—has facilitated the industry’s rapid yet smooth expansion over the past 3 decades.<sup>15</sup> Vertical integration allows poultry firms flexible control of costs, quality, and production levels. It also allows firms to control risk and thereby facilitates the ability of the firm to obtain financing. For example, by owning hatcheries and breeding companies, broiler firms can obtain the type of birds that best fit their market and production system, while ownership of feed mills allows processors to control feed quality and to size operations to take advantage of rail or barge feed grain deliveries.

Factors that have contributed to the vertically integrated structure of the U.S. poultry industry include its relatively short production cycle (involving fast turnover and high production volumes that lead to economies of size) and the linkages between specialized, discrete production stages (hatcheries, growout, slaughter, and further processing). Vertical integration is realized either through contracts (mainly backward integration in the growout stage) or ownership (both backward integration in the feed and hatching of chick stages and forward in the further processing and marketing stages). Virtually all broiler production and more than 90 percent of turkey production is accounted for by vertically integrated operations.

Horizontal integration is also increasing in the U.S. poultry industry, particularly with respect to broiler producers. There has been a trend among top broiler producers to expand their operations into other industry areas, such as red meat. In addition, some of the top poultry producers are large agribusiness firms engaged in a diverse range of agricultural production (GoldKist and ConAgra, for example).

## ***Marketing Methods and Distribution***

Virtually all U.S. consumption of live poultry is accounted for by commercial poultry meat and egg producers. Most poultry producing firms are vertically integrated and generally have company-owned hatcheries.<sup>16</sup> Thus much of the consumption of live poultry is internal to the operation.<sup>17</sup> Except for breeder stock, virtually all live poultry is consumed (by processing plants or egg-laying complexes) near production sites (hatcheries).

Poultry meat marketing and distribution occurs at several levels, depending on the market channel and product form. Immediate consumers include: (i) further processors, who purchase fresh or frozen poultry carcasses and meat from poultry-kill plants to produce further-processed poultry products, such as breaded nuggets and prepared meals, (ii) wholesale distributors, who

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<sup>15</sup> USDA, ERS, “Poultry Industry Boosted by Export Boom in 1990s,” *Agricultural Outlook*, Nov. 1996, p. 14.

<sup>16</sup> Aho, P., “The U.S. Broiler Industry in Metric Numbers,” unpublished paper, 1996, p. 8.

<sup>17</sup> “Top 10 U.S. Broiler Companies,” *Broiler Industry*, Jan. 1997, pp. 18-52.

distribute finished poultry products mainly to retail grocery stores and public eating places and institutions, (iii) foodservice distributors, who distribute finished poultry products mainly to public eating places and institutions, and (iv) pet food processors and renderers, who use poultry byproducts. Final consumers are domestic and foreign populations, which consume poultry products either in the home or in restaurants and institutions.<sup>18</sup>

The principal marketing channels in the poultry industry are shown in figure 3. Almost three-quarters of poultry produced in the United States is sold (either directly from the processor or indirectly through distributors) to retail outlets (principally grocery stores), the food service sector, the government, and other institutions. Poultry processors distribute the remainder of their output to pet food producers and renderers (11 percent), and the export market (16 percent). Close to 8 percent of processed poultry is shipped to further processors for production of high-valued poultry products that are sold mainly to retail outlets and restaurants.

Poultry marketing channels and methods have changed since the 1980s. Table A-6 shows the share of broiler production that is marketed through various distribution channels for selected years. Two major trends can be identified in the table. The first trend is the increasing share of processor shipments to public eating places and less to retail grocery stores. For example, in 1995, 22 percent of processors' shipments went to public eating places compared with 20 percent in 1981, while shipments to retail grocery stores declined from 60 percent to 37 percent over the same time period. The second trend is the increasing share of processor shipments being channeled to the export market (3.5 percent in 1989, compared with 16 percent in 1995). This reflects the boom in U.S. poultry exports during the 1990s (discussed in detail later in this summary).<sup>19</sup>

### ***Pricing Practices***

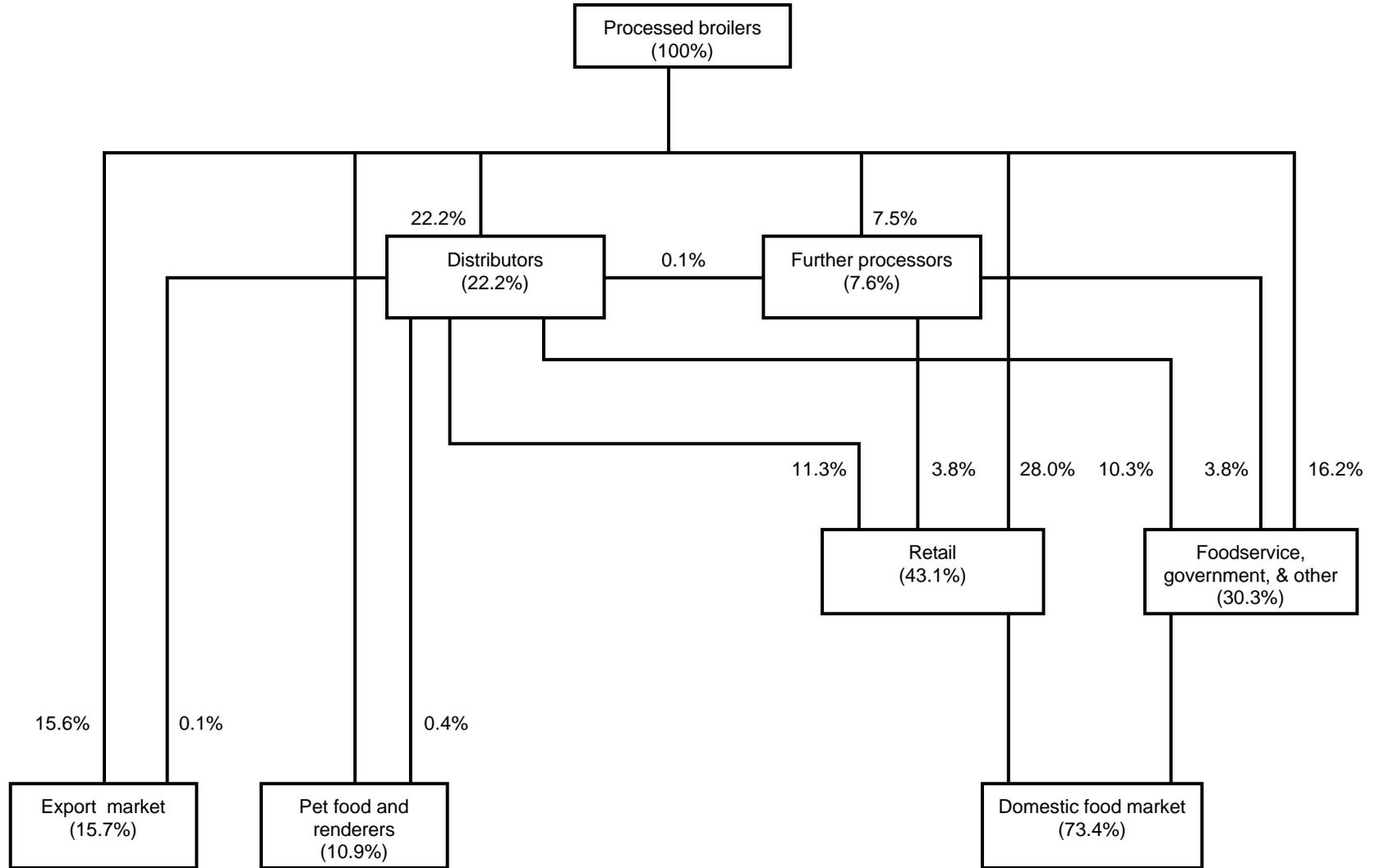
Commodity wholesale prices for poultry meat generally are quoted at markets and production areas around the country based on price quotes published at various frequencies by state departments of agriculture, the USDA, and private organizations. The published price information is collected daily by these organizations through telephone contacts with sources such as processors, wholesalers, and brokers. Producers generally offer discounts based on the published prices. A growing share of poultry is further processed, with prices set by contract between processors and customers such as fast-food restaurants and institutions. Retail poultry prices are set principally by retail outlets, which usually add to the wholesale price a markup that mainly reflects overhead costs. From time to time, retail outlets will feature poultry items as a "loss leader" in order to attract customers to their establishments.

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<sup>18</sup> National Broiler Council, *Broiler Industry Marketing Practices, Calendar Year 1995*, Washington, DC, p. 6.

<sup>19</sup> USDA, ERS, "Poultry Industry Boosted by Export Boom in 1990s," *Agricultural Outlook*, Nov. 1996, pp. 13-17.

**Figure 3**  
**U.S. broiler industry: Major market channels and product flow, 1995**



Source: National Broiler Council, *Broiler Marketing Practices, Calendar Year 1995*, Washington, D.C., figure A.

Prices for live poultry and poultry meat items during 1993-97 are given in table A-7. In general, prices for live poultry were relatively constant during the period. Price trends for poultry meat varied by product, with prices for chicken and turkey breasts declining in response to the rise in supplies, while prices for poultry legs and whole birds increased moderately, largely in response to strong export demand.

### ***U.S. Government Programs***

U.S. poultry exports have received direct benefit from the USDA under the Export Enhancement Program (EEP). The EEP program for poultry provides direct assistance for exports of frozen poultry to approved markets. The EEP helps products produced by U.S. farmers meet competition from subsidizing countries, especially the European Union (EU). Under the program, the USDA pays cash to exporters as bonuses, allowing them to sell U.S. agricultural products in targeted countries at prices below the exporters' costs of acquiring them. Major objectives of the program are to expand U.S. agricultural exports and to challenge unfair trade practices. The EEP was announced by USDA on May 15, 1985, and is operated under authority of the Agricultural Trade Act of 1978 as amended, the Uruguay Round Agreements Act, and the Federal Agriculture Improvement and Reform Act of 1996. Consistent with its export subsidy commitments under the Uruguay Round Agreement (URA) on Agriculture, the United States has established annual ceilings by commodity with respect to export quantities and budget outlays (see table below). The commitment to respect the quantity ceilings became effective July 1, 1995; the commitment to respect budgetary outlay ceilings became effective October 1, 1995.<sup>20</sup>

#### **Poultry meat: U.S. subsidized exports under the Uruguay Round Agreement**

Item	1986-90 base	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
	<i>(1,000 metric tons)</i>						
Annual quantity commitments	35	34	33	32	30	29	28
	<i>(million dollars)</i>						
Annual budget outlays . . . . .	22.7	21.4	20.0	18.6	17.3	15.9	14.6

Source: USDA, ERS, *Agricultural Export Programs. Background for 1995 Farm Legislation*, Agricultural Economic Report No. 716, June 1995, p. 29, table 3a.

According to the USDA, by 1997, 309,000 metric tons of poultry had been sold through the EEP since its inception (table A-8). During 1993-96, only 86,400 tons were exported under the program. No EEP sales were made in 1997. In recent years, U.S. product has generally been exported profitably without subsidy. However, in early 1998, the Secretary of Agriculture announced that funds would be forwarded to subsidize the sale of about 20,000 tons, or \$30 million worth of poultry exports to markets in the Middle East. This measure was taken as the

<sup>20</sup> USDA, FAS, *EEP Factsheet*, found at Internet address <http://www.fas.usda.gov/info/factsheets/eep.html>, retrieved July 5, 1998.

equivalent to the amount which U.S. exporters would lose on poultry exports to European markets caused by failure to reach a veterinary equivalency agreement<sup>21</sup> for poultry with the EU.<sup>22</sup>

Quantities and destinations for U.S. frozen poultry eligible for bonus awards under the EEP in fiscal 1998 were: Middle East ( Saudi Arabia, Egypt, Jordan, Lebanon, United Arab Emirates, Oman, Bahrain, Kuwait, Qatar, Yemen), 20,210 tons; Asia (China, Hong Kong, South Korea, Singapore), 7,795 tons; and Africa (Angola, Benin, Congo, Côte D'Ivoire, The Democratic Republic of the Congo, Gabon, Ghana, Liberia, Mauritius, Namibia, Nigeria, Reunion, Togo), 3,710 tons.

The Market Access Program (MAP) uses funds from the USDA's Commodity Credit Corporation (CCC) to help U.S. producers, exporters, private companies, and other trade organizations finance promotional activities for U.S. agricultural products. The MAP encourages the development, maintenance, and expansion of commercial export markets for agricultural commodities. Activities financed include consumer promotions, market research, technical assistance, and trade servicing.<sup>23</sup> In 1998, the USA Poultry and Egg Export Council (USAEEC) received \$3.2 million under the USDA's Market Access Program.

The USDA also has used the Food for Progress program to assist the poultry industry by donating 36,000 metric tons of soybean meal to USAEEC, which will sell it to private buyers in Russia. The proceeds will be used to support a broiler project there which is intended to demonstrate good broiler-production practices.<sup>24</sup> The Food for Progress program is authorized under Section 1110 of the Food Security Act of 1985. The authority provides for a responsive food aid mechanism to encourage and support the expansion of private enterprise in recipient countries and is meant to help countries seeking to implement democratic and market reforms.<sup>25</sup>

Indirect government programs affecting the poultry sector include loans provided by the Farmers Home Administration at below-market rates for operating and capital expenses, Federal and State inspection and research services, and special tax provisions. In addition, programs that affect the U.S. feed grain industry (mainly corn), such as the Conservation Reserve

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<sup>21</sup> Under a veterinary equivalence agreement the United States and EU would recognize each others' sanitary and phytosanitary (SPS) measures as equivalent in terms of providing adequate protection to public food safety and animal health, even though the respective SPS measures may be different. Through negotiations, countries thoroughly review each others' sanitary measures to ensure that the appropriate level of protection is maintained. One of the benefits of an equivalency agreement is the facilitation of trade without jeopardizing food safety. For further information, see USDA press release, "Q & A's on United States - European Union Veterinary Equivalence Talks," May, 1997, found at Internet address <http://www.usda.gov/news/releases/1997/05/may.htm>, retrieved Oct. 2, 1998.

<sup>22</sup> Agra Europe, "EU Poultry Export Markets Targeted," No. 1796, May 8, 1998, p. 1.

<sup>23</sup> USDA, FAS, *Market Access Program*, found at Internet address <http://www.fas.usda.gov/mos/programs/mapprog.html>, retrieved July 6, 1998.

<sup>24</sup> *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 2.

<sup>25</sup> USDA, FAS, *Food for Progress and Section 416(b)*, found at Internet address <http://www.fas.usda.gov/excredits/pl480/progress.html>, retrieved July 5, 1998.

Program, crop insurance, marketing loans to producers, and export enhancement programs for feed grains, affect feed prices and, therefore, poultry production costs.<sup>26</sup>

The U.S. poultry industry is subject to mandatory inspection by the Food Safety Inspection Service (FSIS) of the U.S. Department of Agriculture, if such production enters interstate or foreign commerce. The FSIS administers poultry inspection under the Poultry Products Inspection Act, as amended<sup>27</sup> to ensure that poultry products for use as human food are safe, wholesome, and accurately labeled.<sup>28</sup>

In early 1998, the FSIS began requiring large meat and poultry facilities (those with 500 or more employees)<sup>29</sup> to have in place Hazard Analysis and Critical Control Point (HACCP) regulations in order to assist in the identification and evaluation of food safety hazards that might affect the safety of their products.<sup>30</sup> The HACCP system stresses the prevention of poultry contamination by identifying and controlling points in the production and processing system that are prone to contamination hazards. Under the new system, each plant will operate under a HACCP plan designed to prevent contamination of meat and poultry.<sup>31</sup> In addition, plants will continue to maintain the standard operating procedures for sanitation and slaughter and will test for generic *E. coli*. The FSIS will collect samples to ensure that plants are reducing and controlling the amount of poultry that is contaminated with salmonella. HACCP systems have been promoted by government and scientific groups and incorporated for many years into regulations on canned foods.

Seven principles apply to how meat and poultry establishments are to design, develop, implement, and control a HACCP plan for their operations. The principles of a HACCP system are: (i) conduct a hazard analysis by preparing a list of steps in the process where food safety hazards are reasonably likely to occur and describing the preventative measures necessary to control the hazards; (ii) identify critical control points in the process, (iii) establish critical limits for preventative measures associated with each identified critical control point, (iv) establish critical control point monitoring requirements, and establish procedures from the results of monitoring to adjust the process and maintain control, (v) establish corrective actions to be taken when monitoring indicates a deviation from an established critical limit at a critical control point, (vi) establish and maintain effective record keeping procedures that document the entire HACCP system, and (vii) establish procedures for systematic verification that the HACCP system is working correctly and effectively.<sup>32</sup> Under the new rules, the USDA could deny

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<sup>26</sup> USDA, ERS, *Provisions of the Federal Agriculture Improvement and Reform Act of 1996*, Agriculture Information Bulletin No. 729, Sept. 1996.

<sup>27</sup> 21 U.S.C. 451 et seq.

<sup>28</sup> USDA, FSIS, *Meat and Poultry inspection. 1997 Report of the Secretary of Agriculture to the U.S. Congress*, September, 1997, p. i.

<sup>29</sup> All plants will be required to establish a HACCP after a 2-year phase-in period.

<sup>30</sup> "HACCP Takes Effect for Some Next Week, but Questions Remain on Critical Issues," *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 20.

<sup>31</sup> "HACCP Inspection System takes Effect at Large Processing Plants," *Farm Bureau News*, Vol. 77, No. 5, Feb 2, 1998, p. 2.

<sup>32</sup> "HACCP Takes Effect for Some Next Week, but Question Remain on Critical Issues," *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 20.

permits to plants to operate as a Federally inspected plant if HACCP systems fail to be implemented.

## ***Research and Development***

The rapid growth in industry productivity over the last 20 years has been largely the result of research and advances in technology development. Research and development in the poultry industry can broadly be categorized into four major areas: animal genetics, health, and nutrition; production technology; processing technology; and development of consumer products and market research.

Research on animal genetics, health, and nutrition is conducted at many universities throughout the United States, as well as by the major poultry companies. Poultry scientists are continuing to work on the prevention of important diseases of poultry such as Avian Influenza, Newcastle Disease, Marek's Disease, and Cellulitis,<sup>33</sup> while research continues to focus on bird nutrition and improving the efficiency of poultry feeds.<sup>34</sup> Biotechnology is also being utilized to improve poultry breeding, nutrition, and health care. For example, biotechnology is being used to develop enzyme products that can increase the utilization of nutrients in the feed, as well as providing solutions to health care problems through better techniques in diagnosis, vaccine production, and improving disease resistance through genetically modified birds.<sup>35</sup>

In the poultry-processing sector, research and development is a requirement for firms to stay competitive. Over the past few decades, the poultry industry has seen a rapid increase in automation. New technologies aimed at improving poultry production are continuing to be developed in all aspects of broiler breeding and growout, such as alternative litter materials and management practices, and alternative methods of feeding and supplying drinking water to birds.<sup>36</sup> Commercial poultry processing is very automated with killing, defeathering, evisceration, chilling, cutting up, and packaging, all achieved without the direct intervention of workers.<sup>37</sup> Attempts to mechanize the catching and loading of broilers have been made for the last 25 years. Recently, however, a fully automated live bird harvesting machine has been developed which provides substantial saving in terms of labor and carcass damage.<sup>38</sup> Research is being conducted on developing a new breed of robot that will increase efficiency and competitiveness in the poultry industry.<sup>39</sup>

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<sup>33</sup> "Avian Influenza: Control and Prevention," *Poultry International*, April 1998, pp. 32-45; "Newcastle Disease: Prevention and Control," *Poultry International*, Feb. 1998, pp. 26-30; "Current and Future Strategies to Control Marek's Disease," *Poultry International*, Jan. 1998, pp. 40-43.

<sup>34</sup> "11th European Symposium on Poultry Nutrition," *Poultry International*, Dec. 1997, pp. 40-46; "Nutrition Opportunities," *Poultry International*, Dec. 1997, pp. 48-50.

<sup>35</sup> "Biotechnology Revolution," *Poultry International*, Feb. 1997, pp. 38-39.

<sup>36</sup> "Advances in Production Technology," *Poultry International*, May 1998, pp. 24-30.

<sup>37</sup> "Advances in Primary Processing Techniques," *Poultry International*, Jan. 1998, pp. 26-30.

<sup>38</sup> "At Last - Fully Automated Livebird Harvesting," *Poultry International*, Mar. 1998, pp. 44-48.

<sup>39</sup> "Hatching a Robotics Revolution in the Poultry Industry," *Research Horizons*, Spring 1998, pp. 19-20.

Research is also being conducted by food scientists to improve the versatility and quality of poultry products. New products are continually being developed, especially products designed to improve the convenience of preparation (such as frozen chicken dinners and breaded chicken fillets). Research is also being conducted on consumer attitudes toward chicken. For example, in a recent study, chicken was much more likely to be perceived as being versatile, having good taste, easy to prepare, healthy and nutritious, consistent in quality, and reasonably priced when compared with beef and pork.<sup>40</sup>

### ***Extent of Globalization in Industry***

The level of foreign investment in the U.S. poultry industry is low. An exception is the breeder sector of the industry, which includes several foreign-owned, multinational companies. However this sector is small compared with the total output of the industry. Foreign investment by U.S. poultry firms has increased in certain foreign markets in recent years. An example is the major investment by Pilgrim's Pride (the fourth-largest U.S. poultry company in 1997) in Mexico. Pilgrim's Pride of Mexico is now the second-largest broiler producer in Mexico, processing about 126 million birds per year. The growth of Pilgrim's Pride in Mexico resulted from the purchase of various Mexican poultry operations.<sup>41</sup> In Central America, Cargill operates Alcon, the largest broiler producer in Honduras, while Tyson Foods has just signed an agreement with Panama's Grupo Melo, to produce and distribute its further processed products in Latin America.<sup>42</sup> Joint ventures are also taking place in Central Europe and Russia. For example, foreign feed and poultry companies have shown a growing interest in Poland, and some have already set up joint ventures with Polish counterparts.<sup>43</sup> Investors from the United States are also seeking financial involvement in the renovation of Russia's giant poultry factories.<sup>44</sup>

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<sup>40</sup> "How Consumers Perceive Chicken, Beef, and Pork," *Broiler Industry*, Aug. 1997, pp. 36-43.

<sup>41</sup> "Pilgrim's Pride of Mexico: Covering All the Bases," *Broiler Industry*, Mar. 1998, pp. 32-36.

<sup>42</sup> "Latin America: Neighbor, Customer, Competitor," *Broiler Industry*, July 1998, pp. 22-32.

<sup>43</sup> "Poland's Expansion Attracts Foreign Investors," *Broiler Industry*, Apr. 1997, p. 30.

<sup>44</sup> "Russia: Concern About U.S. Investment Proposals," *Poultry International*, Oct. 1997, pp. 18-19.

# III. U.S. MARKET

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## Factors Affecting Demand

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Factors affecting the demand for most agricultural products, including poultry, can be generally categorized into market size factors and consumer preference factors.<sup>45</sup> The primary market size factors include the size of the population and disposable income, while major consumer preference factors include price level and price relative to substitute products, consumer tastes, product attributes, and product advertising. All these factors have contributed to the rapid growth in poultry consumption since the mid- 1970s.<sup>46</sup>

The growth in U.S. population and real per-capita disposable income has increased the overall size of the poultry market over the past several years. For example, between 1993-97, the annual growth of the U.S. population was 1 percent, increasing the potential market for poultry by 10 million persons.<sup>47</sup> Over the same time period, real per-capita disposable income in the United States grew by 2 percent annually, translating into a similar percent growth in poultry consumption.<sup>48</sup>

Among the consumer preference factors that led to growth in poultry consumption was the price of poultry. Retail prices per pound for chicken have remained well below those for beef and pork. In 1997, consumers paid, on average, \$1.50 per pound for broilers. Retail beef prices, in contrast, averaged \$3.00 per pound, and pork \$2.50 per pound. Between 1986 and 1997, retail prices rose 46 percent for seafood, 36 percent for beef and veal, 37 percent for pork, and 33 percent for broilers. The larger increase for beef relative to broilers partly explains the shift to chicken.<sup>49</sup> In addition to price and income changes, other factors have influenced poultry demand. Changing demographics (e.g., more dual income and single-parent families), technology changes (e.g., the widening use of the microwave oven), increasing health concern about saturated fat and cholesterol, and poultry's ease of preparation have all contributed to poultry's increasing popularity.

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<sup>45</sup> For a detailed discussion of factors affecting demand for agricultural products, see William G. Tomek and Kenneth L. Robinson, *Agricultural Product Prices*, Cornell University Press, Ithaca, NY, 1985. Also, see USDA, ERS, *The Food Marketing Revolution, 1950-91*, Agricultural Economic Research Bulletin No. 660, Sept. 1992.

<sup>46</sup> USDA, ERS, *Food Consumption, Prices, and Expenditures, 1970-95*, ERS Statistical Bulletin No. 939, Aug. 1997, pp. 13-14.

<sup>47</sup> Population and real disposable income sourced from USDA, ERS, Table 2—U.S. Gross Domestic Product and Related Data, *Agricultural Outlook*, various issues, 1995-98.

<sup>48</sup> The income elasticity of demand for poultry (i.e., the percent change in consumption for a 1 percent change in income) is estimated at 1.

<sup>49</sup> USDA, ERS, *Food Consumption, Prices, and Expenditures, 1970-95*, ERS Statistical Bulletin No. 939, Aug. 1997, pp. 13, and tables 92 and 93; USDA, ERS, *Livestock, Dairy, and Poultry*. Monthly reports, various issues 1997 and 1998.

The poultry industry has taken several steps to cater to consumers, including providing numerous new brand-name, valued-added processed products for consumers' convenience, as well as a host of fast-food products.<sup>50</sup> The proliferation of precooked, pan-ready, and other upscale raw products, like boneless breast fillets, also boosted poultry's popularity.<sup>51</sup> Chicken and turkey franks, turkey breakfast sausages, and turkey ham and salami appeal to some consumers' concerns about fat. Fresh ground chicken and turkey are marketed as lower fat substitutes for hamburger in spaghetti sauces and other recipes.

## Consumption

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### *Consumption Trends*

The U.S. poultry market is the largest in the world, accounting for nearly one-quarter of global poultry consumption in 1997. U.S. per-capita poultry consumption also led the world in 1997 at 74 pounds (table A-9).<sup>52</sup> Apparent U.S. consumption of live poultry and poultry meat increased from \$11.8 billion dollars in 1993 to \$14.6 billion in 1997, growing at an annual average rate of 5.7 percent (table A-10). The U.S. poultry market is complex and dynamic. However, consumption can be generally divided into two segments: live poultry and poultry meat.

U.S. producers of poultry meat and eggs are the consumers of live poultry. As such, live poultry is an intermediate product that is used to convert feed into meat and eggs; a relatively small proportion (less than 10 percent) is typically retained for breeder or production stock. On average, U.S. consumption of live poultry rose 3.4 percent annually during 1993-97, and by 1997, consumption had exceeded 9 billion birds (table A-11). The bulk of U.S. consumption of live poultry is accounted for by chickens, with a smaller, but rising share accounted for by turkey. A relatively minor share of poultry consumption consists of ducks, geese, and guineas. The rise in U.S. consumption of live poultry during the period under review was a direct result of an increase in demand for poultry meat in both the domestic and export market.<sup>53</sup>

The U.S. market has a general preference for white poultry meat cuts; other cuts, such as legs, chicken offal and feet, are more often exported. U.S. consumption of poultry meat continued a long-term rise during 1993-97, during which time it increased in quantity by 2.3 percent per annum (table A-12). As in the case of live poultry, the principal poultry meat item in the U.S. market is chicken, which grew by almost 3 percent annually during 1993-97, followed by turkey meat, which grew by less than 1 percent annually. The consumption of other poultry, which is relatively minor, declined by 25 percent annually (table A-12).

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<sup>50</sup> USDA, ERS, *Food Consumption, Prices, and Expenditures, 1970-95*, ERS Statistical Bulletin No. 939, Aug. 1997, pp. 14.

<sup>51</sup> "Rules for Successful Further Processing," *Broiler Industry*, June 1997, pp. 32-36.

<sup>52</sup> Based on ready-to-cook weight. USDA, ERS, *Agricultural Outlook*, June-July 1998, table 10, p. 37.

<sup>53</sup> No significant change in consumer demand for eggs was observed during 1993-97.

Per-capita consumption of poultry meat has risen substantially since 1970 (table A-9). This rise, in large part, has been at the expense of red meat consumption. Per-capita chicken and turkey consumption averaged 48 pounds in 1970 (or about one-quarter of total meat consumption), compared to 145 pounds for red meat (i.e., beef, veal, pork, and lamb). By 1997, per-capita consumption of poultry had increased to 92 pounds (or 44 percent of total meat consumption) and per-capita red meat consumption had declined to 118 pounds. Per-capita consumption of chicken surpassed that of pork in 1982 and beef in 1990.

Another poultry consumption trend is toward increased sales of further processed poultry products (e.g., chicken nuggets and breaded chicken fillets). In 1981, 53 percent of broilers were sold as whole birds, with 44 percent cut-up chicken parts, and 3 percent processed broiler products. By 1995, only 14 percent of broilers were sold as whole birds, with 75 percent cut-up chicken parts, and 11 percent processed broiler products.<sup>54</sup> This trend is evidence of the move by consumers toward higher value-added products and convenience in preparation.

### ***Import Penetration Levels***

Because the United States is the world's most efficient poultry producer, its imports are negligible. Both for live poultry imports and imports of poultry meat, imports represent less than one-quarter of one percent of domestic consumption (tables A-10, A-11, and A-12).

### ***Conditions of Competition Between Foreign and U.S. Poultry Products***

Differences in international production costs are largely reflected in the wholesale prices paid for poultry in various countries. A survey of poultry production costs and wholesale prices was conducted in 1995.<sup>55</sup> In that year, the wholesale price in Japan was almost 148 cents per pound, while in Russia the price was 120 cents per pound (table A-13). Wholesale prices in Europe were about 91 cents per pound, and roughly 60 cents per pound in the major Asian producing countries, China and Thailand. In comparison, the price in the United States was almost 56 cents per pound. However, the lowest price of countries surveyed was Brazil, with wholesale prices averaging only 43 cents per pound in 1995. Thus, the wholesale value of dressed whole birds in major importing countries is roughly three times the figure in the leading exporting countries.

The cost of feed is the most important factor affecting conditions of competition between foreign and U.S.-produced products, as the cost of feed accounts for one-half to three-fourths of the cost of producing poultry products in major producing countries. The production cost

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<sup>54</sup> National Broiler Council, *Broiler Industry Marketing Practices, Calendar Year 1995*, Washington, DC, p.15.

<sup>55</sup> "Broilermeat Production Cost Comparison," *Poultry International*, Jan. 1996, pp. 24-28.

survey found feed conversion ratios were all about 2:1, although in Russia the ratio was 4.3:1, reflecting the poor quality of Russian feed. The price of poultry feed, converted into U.S. dollars, was lowest in Brazil and the United States, but more than double this level in Japan. Producers in the EU also faced significantly higher feed costs than in any other major broiler exporting country.

Based on these cost estimates some general conclusions can be made regarding competition between foreign and U.S. poultry products. First, production of broiler meat in the major importing countries is several times more expensive than in the main exporting countries, and as such, the likelihood is that the quantities imported will increase. Second, among the major exporting countries, growing costs in the EU countries are much higher than in the main exporting nations outside the EU. This difference is mainly accounted for by the higher price of feed ingredients inside the EU. If EU feed prices were equivalent to world prices, then EU exporters would be much more competitive with other major exporters in this trade. Third, of major exporting countries, China is geographically closer to the main importing countries of Japan and Hong Kong and therefore has a transportation advantage (although the United States and Brazil have an advantage over China in terms of production costs). Fourth, importing countries are increasingly looking to value-added items, many of which are relatively labor-intensive, thus giving an advantage to China where labor costs are many times less than in Japan or the United States, and even below the rates quoted for Brazil and Thailand.

## Production

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U.S. production of live poultry increased from 7.9 billion birds in 1993 to 9 billion birds in 1997, or by 14 percent (table A-11). Live chicken production accounted for 96 percent of total live poultry production and rose by 14 percent during the period under review. Meat-type chickens are the principal type of chicken produced. This type accounted for 92 percent of U.S. live chicken production during the period under review. U.S. production of live turkey increased 4 percent during 1993-97; production of other live poultry remained relatively constant. The trends in live poultry production mirrored the demand for poultry meat and eggs, as this demand is the primary determinant in such production.

U.S. production of poultry meat increased substantially during 1993-97, from 27.3 billion pounds, valued at \$13.0 billion, to 33 billion pounds, valued at \$17.1 billion (tables A-10 and A-12). This represented an annual average increase of 4.8 percent in quantity and 7.2 percent in value.<sup>56</sup> A continuing, long-term expansion in the demand for poultry meat was the primary cause of the rise in production, although demand rose more slowly than supply during the period under review. U.S. production of broiler meat, the primary poultry production item, rose by 23 percent in quantity during 1993-97 (table A-14). Production of turkey meat rose at a slower rate of 13 percent during the period. Production of other chicken was relatively constant.

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<sup>56</sup> The higher growth rate in value compared with quantity is indicative of increased production of higher-valued poultry products.

## IV. U.S. TRADE

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### Overview

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The U.S. poultry industry historically has been orientated toward the domestic market, which is the second-largest in the world (behind China). However, between 1993 and 1997, U.S. exports more than doubled, averaging more than 26 percent annual growth (compared with a 5-percent annual growth in production). Thus while exports represented only about 8 percent of production in 1993, they accounted for more than 17 percent in 1997 (table A-12). This rapid export expansion reflected low feed costs, highly skilled labor, state-of-the-art production and processing technology, and substantial investments in export market development. Largely because of these factors, foreign poultry producers are generally not competitive with domestic producers in the U.S. market, and thus imports typically account for less than one-quarter of one percent of the U.S. poultry market annually. In addition, health and sanitary restrictions limit U.S. imports of live birds and poultry meat.

The U.S. trade balance of poultry is positive and growing. During 1993-97, this balance more than doubled from \$1.20 billion to \$2.47 billion, an average annual increase of 20 percent (table A-15). Virtually all of the improvement in the balance of trade was accounted for by increased exports, which rose from \$1.23 billion in 1993 to \$2.51 billion in 1997. Imports grew by 16 percent annually during 1993-97. However, with imports representing less than 2 percent of exports, import growth had little impact on the overall trade balance. The balance of trade improved for virtually every major market during the period.

### U.S. Imports

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#### *Principal Import Suppliers and Import Levels*

##### **Products imported**

U.S. poultry imports amounted to \$42.7 million in 1997. Major import items were live chicken (51 percent, by value); fresh, chilled, or frozen chicken (26 percent); and prepared and preserved poultry (22 percent) (table A-16). Imports of live poultry, mostly chick and turkey poults for breeder stock (live chickens and other poultry not over 185 grams), more than doubled between 1993 and 1997. Imports of live poultry over 185 grams consist mainly of spent laying hens from Canada destined for U.S. processing plants near the border. About one-third of imports of fresh, chilled, or frozen poultry are chicken cuts and offal; such imports also grew rapidly

during 1993-97. Processed and prepared poultry specialty items, such as smoked turkey and poultry liver pates, accounted for a declining share of U.S. poultry imports. During 1993-97, imports of poultry livers, particularly goose livers, declined.

### **Import levels and trends**

U.S. imports of live poultry showed an upward trend during 1993-97 and ranged between 6.8 million birds in 1994 and 9.5 million birds in 1997 (table A-17), reflecting an increased demand for breeder stock over the period. The value of live imports also increased over the period from \$9.7 million in 1993 to \$22.0 million in 1997. This growth reflects both a greater volume of imports and increases in world prices (reflected by import unit values). U.S. imports of poultry meat showed an increase over the period, particularly between 1994 and 1997, when the value of such imports doubled (table A-18). The trend in import value largely reflects changes in trade quantities, and there seems to be no discernible trend in unit values during 1993-97.

### **Principal import suppliers**

Canada, by far, is the primary foreign supplier of U.S. imports of live poultry. During 1993-97, Canada accounted for virtually all such imports, with a minuscule amount being supplied by France, Thailand, and the United Kingdom (table A-17). Canada is also the primary supplier of U.S. imports of poultry meat. In 1997, Canada supplied over 83 percent of the quantity of U.S. imports of poultry meat, a share that has increased from 60 percent in 1993 (table A-18). Imports from Canada have grown, both in total volume and as a share of total U.S. imports, largely because of the reduction in U.S. tariffs on Canadian poultry products since 1993. Other major suppliers include Israel, France (mostly high-valued liver pate), and Hong Kong.

### **U.S. importers**

U.S. importers of live poultry generally are U.S. subsidiaries of multinational poultry-breeding companies. These companies are based mainly in Canada and Europe, which are the sources of U.S. imports. U.S. poultry importers are generally of two types: poultry processors along the Canadian border who utilize spent laying hens for further processing, and importers of poultry specialty products.

## ***U.S. Trade Measures***

### **Tariff measures**

The provisions of the HTS for the live poultry and poultry meat covered in this summary are shown in table A-19. This table shows the general and special column 1 rates of duty applicable to U.S. imports of live poultry and poultry meat as of January 1, 1998. Live poultry trade is

covered in chapter 1, poultry meat in chapters 2 and 16. In addition, the table shows U.S. exports and imports of live poultry meat, by HTS subheading, during 1997. Appendix B includes an explanation of tariff and trade agreement terms.

The aggregate trade-weighted average rate of duty for all products included in this summary was 0.5 percent ad valorem in 1997, and the aggregate trade-weighted average rate of duty for dutiable products was 0.6 percent ad valorem (table A-20). Duties on live poultry were the lowest (at only 0.2 percent in 1997), while duties on prepared and preserved poultry products were slightly higher (over 1 percent). In 1993, the average rate of duty was 2.6 percent for all products, and 3 percent based on dutiable value. This drop is largely the results of tariff reductions on imports from Canada over the 1993-97 period.

### **Nontariff measures**

U.S. imports of live poultry and poultry meat are subject to animal and plant health and sanitary regulations promulgated by the FSIS under the Poultry Products Inspection Act, as amended.<sup>57</sup> These regulations require that live poultry imports must be quarantined and poultry meat imports must be healthful, wholesome, fit for human consumption, and must comply with any standards, rules, and regulations that apply to the like domestic products. Imported poultry must originate in countries and plants approved to export to the United States.<sup>58</sup>

U.S. imports of live poultry and certain poultry meat are restricted to certain countries certified to be free of various poultry and poultry-borne diseases, including viscerotropic velogenic Newcastle disease and other diseases. Imports of live poultry and poultry meat generally are restricted to countries which the USDA considered free of such diseases. Imports of live poultry must be quarantined for 30 days. As of July 1998, countries approved to export poultry meat to the United States, were Canada, France, Hong Kong, and Israel. The Mexican Government is working closely with the FSIS for the certification of the Mexican food safety system and selected plants to be eligible to export poultry to the U.S. market. Several States including Sonora, Yucatan, and Sinaloa have been visited for such purposes.<sup>59</sup> Labels on retail packages of poultry shipped to the United States must meet U.S. labeling requirements.

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<sup>57</sup> 21 U.S.C. 451 et seq.

<sup>58</sup> USDA, FSIS, *Importing Meat and Poultry to the United States. A Guide for Importers and Brokers*, found at Internet address <http://www.usda.gov/agency/fsis/importa.htm>, retrieved June 9, 1998.

<sup>59</sup> USDA, FAS, *Poultry. Annual Report*, Mexico City, AGR No. MX7075, July 17, 1997, p. 4.

## **U.S. Exports**

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### *Principal Markets and Export Levels*

#### **Products exported**

The United States exports significant amounts of both live poultry and poultry meat. Of the \$2.5 billion of poultry exports in 1997, \$2.2 billion (87 percent) were fresh, chilled, or frozen chicken, \$204 million (8 percent) were of prepared and preserved poultry, and \$118 million (5 percent) consisted of live chickens (table A-21). Exports of live poultry, which consist mostly of chicks and turkey poults for breeder stock (live chickens and other poultry not over 185 grams), have remained fairly stable between 1993 and 1997. Live poultry exports consist mainly of breeder stock chicks (both meat-type and egg-type) to the adjacent markets of Canada and Mexico, and other major world poultry-producing countries, such as Brazil. Some growout stock and spent laying hens are also exported, mainly to Canada and Mexico. Exports of poultry meat consist primarily of fresh, chilled, or frozen poultry, with chicken cuts and offal accounting for over three-quarters of such exports. Exports of chicken cuts and offal increased by almost \$1 billion during 1993-97. A significant amount of turkey meat is also exported, mainly in parts. A declining share of U.S. poultry exports is accounted for by processed and prepared poultry specialty items, largely because of a sharp decline in exports of poultry livers between 1993 and 1995 (table A-21).

#### **Export levels and trends**

U.S. exports of live poultry remained fairly stable during 1993-97, averaging almost 60 million birds, and ranging from about 68 million birds in 1994 to 50 million birds in 1996 (table A-22). The average annual value was close to \$117 million. The main markets were Canada (which accounted for 48 percent of the quantity shipped in 1997), Mexico (8 percent), Japan (5 percent), and Brazil (5 percent). The largest growth in the quantity of U.S. live poultry exports during 1993-97 was to Japan and Thailand. These markets are expanding their domestic poultry and egg industries and rely on breeding stock produced in countries such as the United States.

U.S. exports of poultry meat also more than doubled during the review period, from 2.4 billion pounds, valued at \$1.1 billion, in 1993 to 5.7 billion pounds, valued at \$2.4 billion, in 1997 (table A-23). Major increases occurred in both the traditional export markets, such as Canada and Hong Kong, and in relatively new markets, such as Russia, Latvia, China, and South Africa. Factors affecting the levels and trends are discussed by individual markets in the next section of this summary.

## *Principal export markets*

### *Russia*

Russia imported 2.2 billion pounds of poultry from the United States in 1997, accounting for almost 40 percent of total U.S. poultry exports (table A-23).<sup>60</sup> Most of the U.S.-Russian poultry trade involves chicken leg quarters.<sup>61</sup> In 1993, Russia imported only 248 million pounds compared with 844 million pounds in 1994 and 1.6 billion pounds in 1995. Thus the growth in trade has been considerable. Growth has been generated by two major factors—declining Russian poultry production and competitively priced, high-quality U.S. product.<sup>62</sup> Demand for poultry in Russia has also been rising in response to higher domestic prices for beef and pork. Although the United States is the dominant supplier of poultry to the Russian market (77 percent in 1997), it faces stiff competition from France and the Netherlands. The French, in particular, are promoting exports of whole chickens or turkey parts to Russia, in an effort not to compete directly with the United States. Increasingly, higher-valued French products such as turkey rolls, turkey shishkabobs, and turkey livers are found on the shelves of supermarkets in Moscow.<sup>63</sup> The availability of export restitutions for French whole chickens (\$144 per ton in late 1997) and chicken quarters (\$94 per ton), and the 20-percent appreciation of the U.S. dollar relative to the French franc has favored Russian imports of French poultry.<sup>64</sup> In addition to stiff competition from the EU, the prospects for expanding U.S. exports to Russia are highly dependent on the strength of the Russian economy.

### *Hong Kong/China*

U.S. poultry exports to Hong Kong /China amounted to \$490 million in 1997, representing about 20 percent of total exports (table A-15). The United States is a major supplier of imported poultry meat to China, nearly all of which is transshipped via Hong Kong into the economically vibrant region of southern China. Over 65 percent of the nearly 400,000 tons of U.S. poultry meat shipped to Hong Kong in 1997 is estimated to have moved into China, and

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<sup>60</sup> Several problems, however, have been associated with this strong dependence on one specific market. In March 1996, Russia temporarily banned U.S. poultry imports and the Arkansas leg quarters prices dropped by 25 percent to 64 cents per kg. There is a significant correlation between U.S. leg poultry prices and shipments to Russia, and suggests that a strategy of market diversification would be in the best interest of the U.S. poultry industry. Source: "International Market Hold Potential for U.S. Meat," *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 28.

<sup>61</sup> The recognition of the quality of U.S. chicken legs by the Russian market started during 1990, when the country had a shortfall of meat imports because of changes in Romania's Government. The least expensive meat available during the early 1990s was U.S. chicken legs, normally discounted by U.S. retailers.

<sup>62</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 4.

<sup>63</sup> *Ibid.*

<sup>64</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 3.

only 70,000 tons directly shipped to China.<sup>65</sup> In 1997, China absorbed nearly 15 percent of all U.S. broiler meat exports, with chicken feet, previously used for rendering by the U.S. industry, constituting nearly half of the value of exports to this market.<sup>66</sup> The major U.S. poultry competitor in the Hong Kong market is Brazil, which has increased shipments of chicken feet, supplied at a lower cost than the United States.<sup>67</sup> Other U.S. competitors include the Netherlands, France, and the United Kingdom. The recent Avian flu threw the Hong Kong poultry market into turmoil.<sup>68</sup> Subsequent slaughter of all Hong Kong poultry, and consumer concerns about safety of all chicken meat, have introduced considerable short-term uncertainty about U.S. prospects to the region.<sup>69</sup> However, the long-term prospects to expand U.S. exports to this market are viewed in the industry as bright. With a population 10 times as large as that of Russia, a rapidly growing economy, changing consumer preference away from pork to poultry meat, and serious structural weaknesses in the domestic production system, Chinese import demand for poultry likely will increase strongly in the coming years.<sup>70</sup>

### *Mexico*

U.S. poultry exports to Mexico were erratic during 1993-97. Largely because of the drop in consumer purchasing power following the devaluation of the peso, U.S. poultry sales to Mexico dropped by 20 percent in 1995. However, economic recovery in 1996 and 1997, coupled with increasing Mexican poultry-processing capacity, saw exports rebound, and by 1997, exports were back at pre-crisis levels. Mexico receives about 9 percent of total U.S. poultry meat exports (the third-largest U.S. market) and the prospects for increasing sales in the future are good.<sup>71</sup> Mexico is the world's largest importer of turkey, and the United States is by far the major supplier.<sup>72</sup> The main products traded are mechanically deboned meat and turkey thigh meat, used for sausage and cold cut production.<sup>73</sup> High pork prices generated by consumer demand and increasing exports to Japan, have increased consumer demand for turkey products, and in 1997, the Mexican Government approved import certificates for 80,000 more tons of U.S. turkey. Although the tariff-rate quota (TRQ) for poultry meat was 104,000 tons in 1997,

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<sup>65</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 4.

<sup>66</sup> *Ibid.*

<sup>67</sup> "International Market Hold Potential for U.S. Meat," *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 28.

<sup>68</sup> Consumption of poultry meat from birds infected with Avian Influenza results in sickness and sometimes death in humans.

<sup>69</sup> USDA, ERS, "Asia Crisis to Trim Prospects for U.S. Meat Exports," *Agricultural Outlook*, Mar. 1998, pp. 7-9.

<sup>70</sup> "International Market Hold Potential for U.S. Meat," *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 28.

<sup>71</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 5.

<sup>72</sup> The Mexican meat-processing industry is highly reliant on U.S. product because the Mexican turkey industry consists of only two major producers who have difficulties competing against U.S. product due to lack of economies of scale and limited integration.

<sup>73</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 4.

imports were more than double this amount, at 210,000 tons.<sup>74</sup> Under NAFTA, in-quota imports were assessed a tariff rate of “Free,” while 1997 over-quota rates were in excess of 200 percent for all items, except whole turkeys (with a rate of about 110 percent).

### *Canada*

Canada imported \$230 million of U.S. poultry in 1997, accounting for 9 percent of total U.S. exports. Canada is by far the largest importer of U.S. live poultry, accounting for about one-half the volume and one-quarter of the value in 1997 (table A-22). U.S. exports of poultry meat to Canada rose from between \$160-\$170 million during 1993-96, to over \$200 million in 1997. The increase was largely a reflection of increased market access under the North American Free Trade Agreement (NAFTA). NAFTA recognizes a supplementary import system which allows additional imports when Canadian supplies fail to meet domestic demand.<sup>75</sup> While market conditions for increasing exports to Canada are favorable, major opportunities are constrained by the TRQ system.

### *Japan*

Between 1994 and 1996, U.S. exports of poultry averaged about \$175 million. However, exports declined by more than 20 percent in 1997 to \$138 million (accounting for 5 percent of total U.S. poultry exports).<sup>76</sup> Large supplies in Japan and the weakened yen in 1997 contributed to the drop in U.S. exports. In addition, increased Japanese demand for ready-made and ready-to-cook products exported by such countries as China, Thailand, and Brazil also likely affected U.S. exports.<sup>77</sup> Compared with the United States, these countries are more cost-competitive in producing processed and valued-added parts and products, largely because of lower labor costs.<sup>78</sup> Also, Chinese boneless leg meat supplies in the retail market dampened imports of larger quantities of U.S. bone-in-leg meat (the major type of U.S. poultry export to the Japanese market) for further deboning.

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<sup>74</sup> Because of large over-quota shipments of turkey, the Mexican swine industry has expressed an interest in requesting SECOFI to initiate an antidumping investigation against imports of U.S. mechanically deboned meat and turkey thigh meat. They perceive increased imports, particularly ones above the NAFTA TRQs, as a threat to their industry. Source: USDA, FAS, USDA, FAS, *Poultry. Semiannual Report*, Mexico City, AGR No. MX8011, Feb 2, 1998, pp. 7-8.

<sup>75</sup> USDA, FAS, *Poultry. Semiannual Report*, Ottawa, AGR No. CA8005, Jan. 1, 1998, p. 5.

<sup>76</sup> “International Market Hold Potential for U.S. Meat,” *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 28.

<sup>77</sup> “Economic Upheaval in Asian Poultry Markets,” USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 6.

<sup>78</sup> USDA, FAS, *Poultry. Semiannual Report*, Tokyo, AGR No. JA8006, Feb 2, 1998, p. 1.

### *Other markets*

In 1996 and 1997, Latvia became a major buyer of U.S. poultry, purchasing \$93 million in 1997. U.S. exports to this market consist mainly of chicken leg quarters, with large volumes re-exported to Russia.<sup>79</sup> The Latvian market is expected to continue to be an important market for U.S. poultry. U.S. poultry sales to Poland amounted to \$55 million in 1997, a level that has remained fairly stable since 1994, and mainly consisted of frozen chicken parts. Approximately 50 percent of Poland's poultry imports are sourced from the United States. Other major suppliers to the Polish market include the Netherlands, Belgium, Hungary, and Canada.<sup>80</sup> Poland serves as a transshipment point to Russia, with an estimated transshipment of 20,000 tons in 1996.<sup>81</sup> U.S. exports of poultry meat to South Africa picked up in 1997, posting a 102-percent increase. Importers increased the pace of sales early in 1997 to avoid imposition of higher tariffs which were requested by South African poultry producers in December 1996.<sup>82</sup> U.S. exports increased from nearly 27,000 tons in 1996 to 54,000 tons in 1997. U.S. exports had slipped in 1996 because of the devaluation of the South African rand against the U.S. dollar.<sup>83</sup> Several nontraditional markets are emerging as providing opportunities for U.S. poultry exporters in the future.<sup>84</sup> Countries holding considerable promise are South Korea, Indonesia, Malaysia, and Taiwan,<sup>85</sup> although the Asian financial crisis makes the short-run outlook for U.S. exports to these markets uncertain.

### **U.S. exporters**

U.S. exporters of live poultry generally are U.S. subsidiaries of multinational poultry breeding companies. U.S. exporters of poultry meat generally are the larger, vertically integrated domestic poultry firms. In 1997, the top U.S. poultry exporters were Tyson Foods, Gold Kist, Perdue Farms, Inc., ConAgra Poultry Company, and Hudson Foods, Inc.

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<sup>79</sup> "Concentration Clouds the Horizon," *Poultry*, Oct./Nov. 1997, p. 29.

<sup>80</sup> USDA, FAS, *Poultry. Annual Report*, Warsaw, AGR No. PL7017, Aug 15, 1997, p. 7.

<sup>81</sup> "International Market Hold Potential for U.S. Meat," *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 28.

<sup>82</sup> USDA, FAS, *Poultry. Annual Report*, Pretoria, AGR No. SF7027, Aug 4, 1997, p. 7.

<sup>83</sup> USDA, FAS, "Status of U.S. Meat Product Exports in 1997," *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 3.

<sup>84</sup> "For Poultry, Small but Rapidly Emerging Countries Hold Much Export Promise," *Feedstuffs*, Vol. 69, No. 3, Jan. 20, 1997, pp. 26-27.

<sup>85</sup> Taiwan and the United States have worked out a "pre-accession (to the World Trade Organization) agreement" to open Taiwan's market to 10,000 tons of U.S. chicken at a tariff rate of 40 percent. The agreement, effective June 1, 1998, allows chicken and other meat imports into a market that previously had a ban on chicken meat imports.

## ***Foreign Trade Measures***

### **Tariff measures**

In general, international rates of duty applicable to imports of live poultry, particularly rates applicable to breeding stock, are low (free in most cases), whereas rates for poultry meat are relatively high. The rates of duty applicable to imports of poultry items in the markets of major U.S. trading partners generally are higher than duty rates for corresponding items in the U.S. market, particularly rates for imports of poultry meat.

#### ***Russia***

Chicken imports into Russia are subject to a 30 percent tariff (approximately \$335 per ton) but not less than 0.3 ECU per kilogram.<sup>86</sup> The rate on turkey is 15 percent ad valorem. Strict enforcement of this tariff beginning in November 1996 resulted in U.S. leg quarter prices dropping from 45 cents per pound to 30 cents per pound, approximately the full value of the tariff.<sup>87</sup> In late 1997, the Russian Government passed a resolution not to change the rates of customs duties, but to add the minimum value (in ECU per 1 kg or per 1 piece) for each group of selected products.<sup>88</sup> This was intended to prevent under-invoicing of goods and products imported into Russia. In the course of its World Trade Organization (WTO) accession negotiations, Russia has prepared a draft list of changes relating to import duties, and is proposing to reduce its rates to a maximum of 10 percent over a period of 7-10 years.<sup>89</sup>

#### ***China***

U.S. poultry meat into China is assessed a duty rate of 20 percent, plus an additional 13 percent value-added tax. Until October 1, 1997 the duty rate was 45 percent. Special Economic Zones, such as Shenzhen, Zhuhai, Xiamen, Shanton, and Hainan Island, benefit from lower tariffs (up to one-half the normal rate), provided imported products are used for local consumption.<sup>90</sup> Imports of live poultry for breeding purposes enter with a duty rate of "Free." There are no duties on imports into Hong Kong.

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<sup>86</sup> Russian tariffs are reported in terms of ECUs (European Units of Account).

<sup>87</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 3.

<sup>88</sup> USDA, FAS, *Poultry. Semiannual Report*, Moscow, AGR No. RS8007, Feb 9, 1998, p. 7.

<sup>89</sup> USDA, FAS, *Poultry. Annual Report*, Moscow, AGR No. RS7036, July 30, 1997, p. 10.

<sup>90</sup> USDA, FAS, *Poultry. Annual Report*, Shanghai, AGR No. CH6811, Aug. 15, 1996, pp. 9-10.

### *Mexico*

Upon implementation of the NAFTA on January 1, 1994, Mexico converted its import licensing regime for fresh, chilled, and frozen poultry imported from the United States to a transitional TRQ.<sup>91</sup> For the United States, the initial duty-free quota into the Mexican market was 95,000 metric tons of poultry, with exports in excess of the quota assessed a tariff (based on the "tariffication" of Mexico's import license) initially equal to \$1,850 per metric ton, but not less than 133 percent, for whole turkey; and \$1,680 per metric ton, but not less than 260 percent, for chicken and other poultry. The quota is scheduled to grow at a 3-percent annual compounded rate over a 10-year transition period after which it will be eliminated. For 1998, the TRQ for U.S. poultry and poultry products exported to Mexico is 106,924 metric tons. TRQs and over-quota rates for 1998 are as follows:

<b>Product</b>	<b>Quota amount</b>	<b>Over-quota tariff</b>	<b>Value</b>
	<i>(tons)</i>	<i>(percent ad valorem)</i>	<i>(dollars per ton)</i>
Whole turkey .....	2,251	106.4	1,480
Other whole poultry .....	14,632	208	1,344
Turkey parts and offal .....	31,514	208	1,480
Other poultry parts and offal .....	28,138	208	1,344
Mechanically deboned poultry .....	30,389	208	1,344

Trade liberalization in poultry between Mexico and Canada was excluded from the NAFTA; thus, there will be no elimination of tariffs for Mexican-Canadian trade in these products. Mexican producers have complained about imports of fresh poultry temporarily stored in brine. These imports bypass the higher tariffs on fresh poultry meats. To stop these sales, the Mexican Government has reportedly revised the explanatory notes of the Import Tariff Schedule, redefining what constitutes brine.<sup>92</sup>

### *Canada*

Since January 1, 1997, Canadian imports of live poultry breeding stock have been free of duty, while duties on live chickens for slaughter have a rate of 0.2 cents each. Canadian imports of fresh, chilled, or frozen poultry meat are subject to an in-quota duty rate of 1.2 percent ad valorem, but not less than 1.1 cents (Canadian) per kilogram or more than 2.2 cents per

<sup>91</sup> The information provided in this section on Mexican tariff rates under NAFTA was obtained from, USDA, FAS, *NAFTA Agriculture Factsheet: Poultry*, found at Internet address <http://www.fas.usda.gov/itp/policy/nafta/poultry.html>, retrieved June 14, 1998.

<sup>92</sup> "Poultry Exports Rebound with Mexican Economy," *Feedstuffs*, Vol. 70, No. 10, Mar 16, 1998, p. 14.

kilogram. Imports of fresh, chilled, or frozen fatty livers of geese or ducks are duty free. Canadian imports of further processed poultry items are subject to an in-quota duty rate of 1.7 percent ad valorem. Imports of these products are subject to TRQs. Over-quota imports are subject to tariff rates from 168-271 percent.<sup>93</sup>

Imports by Canada remain constrained by a system of TRQs agreed to during the URA negotiations. Under NAFTA, the United States negotiated access to the Canadian chicken market based on 7.5 percent of the previous year's Canadian production level. On January 1, 1995, as part of its implementation of the URA, Canada replaced import quotas with TRQs with high over-quota tariffs on poultry products. The 1997 quota for chicken is set at 54,063 tons, while for turkey, access is determined at the URA access level (6 percent of the 1986-89 consumption), or 4,915 tons.<sup>94</sup>

NAFTA was implemented by the United States, Canada, and Mexico on January 1, 1994, and phases out tariffs on most qualifying agricultural products over a 10-year period, with some tariffs and nontariff barriers to be phased out over 15 years.<sup>95</sup> However, when Canada and the United States replaced import quotas on poultry products with TRQs to comply with the URA, this action raised an apparent contradiction with U.S.-Canadian trade obligations under NAFTA. In 1995 the United States invoked the NAFTA chapter 20 dispute procedures to challenge Canada's application of TRQs to imports from the United States, arguing that Canada's limits on poultry products were in violation of Canada's NAFTA commitment to eliminate all tariffs on U.S.-origin goods. The U.S. position was that under NAFTA neither country may impose tariffs on imports from the other country higher than the tariffs that were agreed to under the U.S.-Canada Free Trade Agreement (CFTA). The United States argued that prior to signing the URA, Canada signed NAFTA, in which it committed not to impose new tariffs on the United States. Yet Canada imposed 290 to 350 percent tariffs on over-quota poultry products originating in the United States.<sup>96</sup> The Canadian Department of Foreign Affairs and International Trade reported that Canada had a right to convert nontariff barriers to TRQs under the WTO and to apply those TRQs to all WTO members, including the United States.<sup>97</sup> In December 1996 the NAFTA dispute settlement panel ruled in favor of Canada, with all five panelists (including those from the United States) supporting Canada's view that it could apply high tariff rates under the WTO tariff schedule to U.S. agricultural imports, notwithstanding preexisting obligations under NAFTA to eliminate all duties between the United States and Canada.<sup>98</sup>

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<sup>93</sup> USDA, FAS, *Poultry. Annual Report*, Ottawa, AGR No. CA7047, Aug. 18, 1997, p. 6.

<sup>94</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 5.

<sup>95</sup> NAFTA incorporated most of the provisions of CFTA and (in many instances) expanded on the earlier agreement.

<sup>96</sup> For further details, see Final Report of Panel, North American Free Trade Agreement Arbitral Panel Established Pursuant to Article 2008 in the matter of Tariffs Applied by Canada to Certain U.S.-Origin Agricultural Products (Secretariat File No. CDA-95-2008-01), Dec. 2, 1996.

<sup>97</sup> *Ibid.*

<sup>98</sup> *North American Free Trade Agreement, Statement of Administrative Action*, published in H. Doc. 103-159, 103d Cong., 1st Sess., pp. 657-62.

### *Japan*

Japanese imports of live poultry enter at a duty rate of “Free.” Japanese imports of fresh, chilled, or frozen poultry meat are subject to ad valorem tariff rates from 5 percent (whole turkeys and turkey cuts) to 20 percent (legs with bone, fresh or chilled). Imports of prepared or preserved poultry also enter at a duty rate of “Free.”<sup>99</sup>

### *Poland*

Polish poultry meat imports are restricted by a TRQ.<sup>100</sup> The tariff rate for poultry meat within the quota is 30 percent ad valorem, but not less than 0.30 ECU per kilogram. The tariff rate for poultry meat over the quota is 60 percent ad valorem, but not less than 0.60 ECU per kilogram. During 1997, the import quota for poultry was set at 31,000 metric tons, or 8.5 percent of 1996 production. Importers of poultry meat must obtain a permit from the Ministry of Economy for each contract.

### *South Africa*

In a move to protect its domestic broiler industry, the South African Government recently approved higher tariffs (2.2 rand per kilogram or \$0.20 per pound) on frozen chicken parts.<sup>101</sup> The new tariff level translates into an effective ad valorem tariff level of 50 percent for U.S. chicken leg quarters, up from the previously imposed tariff of 27 percent. The duty on whole chickens is 27 percent while imported turkey has a duty rate of “Free.”

## **Nontariff measures**

U.S. poultry exports are subject to various nontariff measures throughout the world. Most of these measures relate to health requirements, certification, or labeling issues.

### *Hong Kong*

In August 1997, the Hong Kong Department of Health announced that a strain of influenza A virus had been identified for the first time in humans. The Hong Kong Government identified live chickens as carriers of the virus and since China supplies more than 80 percent of all live chickens in Hong Kong, the government suspended imports of live chickens from China in

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<sup>99</sup> Tariff information for Japan was obtained from the Asia Pacific Economic Cooperation (APEC) tariff database, found at Internet address: <http://www.apectariff.org>, retrieved June 15, 1998.

<sup>100</sup> USDA, FAS, *Poultry. Annual Report*, Warsaw, AGR No. PL7017, Aug 15, 1997, p. 5.

<sup>101</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 4.

December 1997. As a result, all 1.5 million live chickens in Hong Kong were slaughtered within a 24-hour period. Although the import ban applied only to live chickens, general health concerns about poultry consumption led to a drop in sales of frozen chicken, and retailers claimed sales were down as much as 80 percent.<sup>102</sup> Following the introduction of strict new health regulations (including certification that imported birds are avian influenza free), live chicken imports resumed in February 1998.<sup>103</sup> Importers of U.S. poultry into China require licenses issued by the Chinese Animal Plant Quarantine Service. New regulations, implemented in late 1997, reportedly have made acquiring such licenses additionally burdensome on importers.<sup>104</sup>

### ***Mexico***

Until recently Mexico excluded products that were not labeled in either Spanish or English. The Mexican Government has now agreed to accept multilanguage labeling on shipments of U.S. poultry meat to Mexico.<sup>105</sup> However, shipments must continue to comply with Mexican labeling regulations.<sup>106</sup>

### ***Canada***

The importation of certain poultry and poultry meat into Canada is regulated by the Canadian Chicken Marketing Agency, the Canadian Turkey Marketing Agency, and the Canadian Hatching Egg Marketing Agency. These marketing agencies maintain quantitative import quotas as part of a domestic supply management regime. The global quota for chicken, effective 1997, was set at 7.5 percent of the previous year's production level. This quota was liberalized from 6.3 percent as a result of the CFTA. The global turkey quota is 3.5 percent of the previous year's production level, up from 2 percent as a result of CFTA.

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<sup>102</sup> USDA, FAS, *Poultry. Semiannual Report*, Hong Kong, AGR No. HK8013, Jan. 27, 1998, p. 3.

<sup>103</sup> *Ibid*, p. 10.

<sup>104</sup> USDA, FAS, *Poultry. Voluntary Report*, Shanghai, AGR No. CH8805, Feb. 18, 1998, p. 4.

<sup>105</sup> USDA, FAS, *Poultry. Annual Report*, Mexico City, AGR No. MX7075, July 17, 1997, p. 4.

<sup>106</sup> In addition, Mexican producers are pressing the Ministry of Agriculture (Secretaria de Agricultura, Ganaderia Y Desarrollo Rural, SAGAR) to erect animal health and food safety regulations that would slow the imports of U.S. poultry products. Proposed regulation changes, as part of a campaign against Avian Influenza (AI) could result in the United States being classified as an area infected by the disease. If this classification were made, then raw poultry to Mexico would require an official certificate stating that products come from a farm free of AI and that tests at the farm were conducted within 15 days of processing. This concerns U.S. exporters because the USDA's Animal and Plant Health Inspection Service (APHIS) does not issue such certificates. For further information, see USDA, FAS, *Poultry. Semiannual Report*, Mexico City, AGR No. MX8011, Feb 2, 1998, p. 9.

## *Poland*

All poultry meat importers must obtain a permit from the Polish Veterinary Service. The Polish Veterinary Service requires that imports must carry a bilingual (Polish and English) health certificate. Each box containing poultry must be labeled in Polish and must include the date of production expressed in numbers (not as a bar code), the name of the producer, and the product's name.<sup>107</sup>

## *European Union*

In recent years, poultry trade between the United States and the EU has been disrupted by concerns over health and food safety standards. An agreement on U.S.-EU veterinary equivalency<sup>108</sup> failed to be reached by April 1997, following which imports of U.S. poultry to the EU were banned. The major stumbling block in reaching a veterinary equivalency agreement was disagreement on the use of decontaminants, and, in particular, over the use of chlorinated water in U.S. poultry plants as a method of anti-microbial treatment.<sup>109</sup> The EU does not allow for such treatment in poultry processing, while the United States believes that the use of such treatments are a safe and effective way to reduce the presence of bacteria and pathogens which may cause serious health problems.<sup>110</sup> However, it was agreed that EU scientists would begin work on a study of poultry decontaminants, residue testing, and anti-microbial treatment, including the use of chlorine. The report was initiated in May 1997 and is expected to be released in October 1998.<sup>111</sup> If the study finds that U.S. health and safety methods do not entail health risks, the EU has said it will consider a change in its regulations which would open the EU market to poultry from the United States (the United States exported poultry to the EU worth over \$50 million in 1996). Meanwhile, on May 1, 1997, the U.S. Government determined that EU plants were ineligible to ship poultry products to the United States, based on questions regarding application of the new U.S. HACCP regulations. These plants were reinstated in November 1997.<sup>112</sup>

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<sup>107</sup> USDA, FAS, *Poultry. Annual Report*, Warsaw, AGR No. PL7017, Aug 15, 1997, p. 5.

<sup>108</sup> The agreement would have established mutual recognition of meat hygiene standards, thereby facilitating meat and meat product trade between the two partners.

<sup>109</sup> Testimony of Paul Drazek, Special Assistant to the Secretary of Agriculture for International Trade, at a hearing before the House Committee on Agriculture, Subcommittee on Livestock, Dairy, and Poultry, *Hearing Regarding the Current Status and Future Prospects of Trade Between the United States and the European Union*, May 8, 1997.

<sup>110</sup> USDA, *Q & A's on United States - European Union Veterinary Equivalence Talks*, Release No. 0144.97, found at Internet address, <http://www.usda.gov/news/releases/1997/05/0144>, retrieved Sept. 15, 1998.

<sup>111</sup> USITC interview with USDA officials, Sept. 15, 1998.

<sup>112</sup> USDA, FAS, *Poultry. Annual Report*, Brussels, AGR No. BE8504, Mar. 6, 1998, p. 10.

### *Egypt*

After 9 years of prohibiting imports of frozen poultry meat, the Egyptian Government in July 1997 partially rescinded the ban. However, the Government lifted the ban only on whole birds; the ban still applies to poultry meat parts and products. The United States views the continuing ban as violating WTO trading rules; it similarly views Egypt's decision to impose an 80-percent tariff, combined with a minimum import reference price of \$1,500 per ton.<sup>113</sup> Prior to the ban, Egypt was a major importer of frozen poultry meat from the United States, with annual imports valued at an average of \$40 million during the 1980s.<sup>114</sup>

### *Russia*

In the last half of 1995, there were frequent articles in the Russian press about the poor quality of imported poultry (U.S. poultry in particular), which was said to contain harmful antibiotics, hormones, and other substances.<sup>115</sup> In March 1996, the Russian Veterinary Department of the Ministry of Agriculture prohibited imports of poultry from the United States. Within several weeks the situation was settled and U.S. exports to Russia resumed virtually uninterrupted.<sup>116</sup>

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<sup>113</sup> Letter from U.S. Agriculture Secretary, Dan Glickman to Egyptian Minister of Supply and Foreign Trade, Ahmad Ahmad Al Guwaili, dated 1997.

<sup>114</sup> USDA, FAS, "Poultry Meat and Products," *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 4.

<sup>115</sup> USDA, FAS, *Poultry. Annual Report*, Moscow, AGR No. RS6062, Aug. 8, 1996, p. 16; For further details, see USDA, FAS, *Poultry. Voluntary Report*, Moscow, AGR No. RS6024, Mar. 22, 1996.

<sup>116</sup> General Accounting Office, *Agricultural Exports. U.S. Needs a More Integrated Approach to Address Sanitary/Phytosanitary Issues*, report No. GAO/NSIAD-98-32, Dec. 1997, pp. 64-66..

# V. FOREIGN INDUSTRY PROFILE

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## Overview of World Market

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Poultry products are produced and consumed in almost every country in the world. The United States is the world's leading producer of poultry and in 1997 accounted for about 28 percent of total world poultry production (table A-24). This share remained relatively stable during the period under review. In 1994, China overtook the EU as the world's second leading poultry producer, with production growing at over 20 percent annually since 1993. In 1997, the United States and China produced more than one-half the world's poultry production. The EU and Brazil produced 16 percent and 8 percent, respectively, of world output in 1997; thus, the top four producing countries produced about three-quarters of global supply.

Poultry consumption is also highly concentrated. In 1997, China accounted for one-quarter of world poultry consumption and overtook the United States (24 percent) as the world's top poultry-consuming country (table A-25). As in the case of production, the EU (14 percent) and Brazil (7 percent) are the world's third and fourth major consuming countries, respectively. The next leading poultry-consuming countries are Russia, Mexico, and Japan, each with a global consumption share of between 3 and 4 percent.

Since major producing countries are generally the major consuming countries, international trade is fairly limited, and in 1997, slightly under 10 percent of world production was traded. International poultry markets are also dominated by a few participants. Three economies—the United States, Brazil and China—accounted for over 75 percent of world exports in 1997, of which the United States supplied 51 percent (table A-26). China has emerged as a major world exporter since the early 1990s, with a world market share of close to 10 percent. The world's top four importing countries—Russia, China, Hong Kong, and Japan—accounted for almost 80 percent of world imports in 1997, with Russia the leading importing country with a world share of about 25 percent (table A-27). Demand for poultry products in the major markets is generally different; with Russia purchasing mainly chicken leg quarters, China buying mainly chicken feet and wings, and Japan purchasing mainly deboned chicken items.

The world poultry market is characterized by a small number of major trade flows (table A-28). The major suppliers of the Russian market are the United States and the EU, while the majority of Chinese imports are sourced from the United States and Brazil. The United States and the EU also export large volumes to Hong Kong which are re-exported to China. Japanese imports are mainly sourced from China, the United States, Brazil, and Thailand.

## Country Profiles

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The top 10 poultry-producing countries in 1997 are listed in table A-29, which shows production, export levels, and growth during 1993-1997. The top four producers are also major exporters. The other major producers, except for Thailand, export only small volumes and produce mainly for the domestic market. Large differences in individual country production growth in recent years is indicative of major changes in the pattern of poultry production worldwide. For example, since 1993, Chinese poultry production has increased at an annual rate in excess of 20 percent, while Brazil's annual production growth was almost 9 percent over the same time period. In contrast, during 1993-97, production declined significantly in Russia (almost 14 percent per annum) and in Japan (2.5 percent per annum).

A brief overview of the major poultry producing countries is presented below, focusing on their relative size, involvement in the export market, and growth relative to the United States. Also discussed are factors affecting countries' competitiveness in international markets, such as production costs, industry structure, production and processing technology, and nature of government intervention.

### *China*

China was the largest poultry consumer and second largest producer worldwide in 1997. In the same year it ranked second (behind Japan) in world imports, and third (behind the United States and Hong Kong) in exports. China's poultry production and consumption is also among the most dynamic in the world. For instance, between 1993 and 1997, both production and consumption grew annually by more than 20 percent, while its exports and imports grew about 33 and 41 percent, respectively, over the 5-year period. About 80 percent of China's imports are sourced from the United States, and were valued at almost \$60 million in 1997. However, China is a strong competitor of the United States in Asia, principally in Japan but also in South Korea and Singapore. Thus, China represents both a key customer and competitor with the United States in the world poultry market.<sup>117</sup>

The growth and competitiveness of Chinese poultry production can be associated with several important factors. Recent income and population growth has led to strong demand from the domestic market, while the rapid rise of the fast-food sector has provided additional impetus to the broiler industry.<sup>118</sup> This growth in domestic consumption has been supported by increased export demand, principally in high-value added products by Japan. Thus both domestic and

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<sup>117</sup> China's exports are dominated by high-valued processed de-boned broiler pieces to Japan and by live birds to Hong Kong. China's imports are mainly of low-valued frozen poultry parts like offal, gizzards, wing tips, feet, and skin. Because of the different value of products traded, China is typically a net exporter of poultry based on value, while a net importer of poultry based on volume. Source: USDA, FAS, *Poultry. Annual Report*, Shanghai, AGR No. CH6811, Aug. 15, 1996, p. 1.

<sup>118</sup> USDA, FAS, *Poultry. Annual Report*, Shanghai, AGR No. CH7838, Aug. 15, 1997, p. 5.

export demand pressures have provided incentives for expanding production capacity and investments in processing facilities. Another factor behind the expansion in production is the increasing use of improved production and processing technology. For example, high-yield meat-type chicken breeds have been introduced since the mid-1980s, replacing traditional domestic breeds, while other production technologies, such as vaccination protocol, and hatchery and breeder management, have also contributed significantly to China's broiler industry growth.<sup>119</sup> Processing facilities have also been expanded and upgraded, many through joint ventures with foreign firms, several of which are U.S.-based. International joint ventures are also assisting in improving the efficiency of the Chinese poultry-feed industry. Lower feed prices and improved feed quality translate into improved sector efficiency (feed represents about 50-60 percent of the total costs of Chinese production).<sup>120</sup> An additional factor affecting Chinese competitiveness is the change in industry structure. Like most other major producing countries, the structure of the Chinese poultry industry is becoming increasingly concentrated, with fewer firms producing a greater share of total output.<sup>121</sup>

Government trade measures also have been important in providing the domestic industry protection against imports, and in influencing the competitiveness of Chinese poultry exports in international markets. In order to protect the domestic industry, the effective import duty on poultry was 45-percent ad valorem plus an additional 17-percent value-added tax. However, the 45-percent tariff was reduced to 20 percent in October 1997, a change that is expected to boost imports (including those from the United States).<sup>122</sup> Another recent development is the implementation of a quota system for exports of frozen poultry (beginning January 1998). The new policy was enacted to restrict the quantity exported to Japan and maintain higher prices for Chinese poultry in this market. According to traders, the export quota system, as well as the ban on chicken meat imports from China by some countries such as South Africa, United Arab Emirates, and South Korea (following the outbreak of Avian Flu Virus in late 1997), is likely to reduce China's exports, leaving more product on the local market.<sup>123</sup>

## *European Union*

Members of the EU produced 8.3 million tons of poultry in 1997 (roughly 15 percent of world production), compared with about 7.1 million tons in 1993. This represents growth of about 5 percent per annum during 1993-97, almost identical to the rate experienced by the United States over the same period.<sup>124</sup> In 1997, major EU poultry producers included France (27

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<sup>119</sup> Ibid, p. 8.

<sup>120</sup> USDA, FAS, *Poultry. Annual Report*, Shanghai, AGR No. CH6811, Aug. 15, 1996, pp. 4-5.

<sup>121</sup> "China's Rapid Growth in Output of Poultrymeat and Eggs," *Poultry International*, Nov. 1996, pp. 14-20.

<sup>122</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 2.

<sup>123</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 7.

<sup>124</sup> The EU poultry industry is comparable to that of the United States in structure and production technology and efficiency. For example, production efficiency, as measured by the feed conversion ratio, is comparable in the EU and the United States, at about 2 pounds of feed to 1 pound of meat. However, the EU industry generally faces significantly higher production costs, particularly labor and feed.

percent), the United Kingdom (18 percent), Italy (14 percent), Spain (11 percent), and Germany (8 percent).<sup>125</sup> The EU is the world's second largest poultry exporter (behind the United States), with sales of 861,000 tons in 1997, a small increase over the 1993 level. Consumption of poultry in the EU has also grown at an annual rate of about 5 percent since 1993, in general reflecting increased consumer preference for poultry relative to red meat. In addition, 1996 saw the eruption of the BSE crisis,<sup>126</sup> which reduced beef consumption by up to 20 percent that year. Indications are that some of the decrease in beef consumption was replaced by poultry meat.<sup>127</sup>

EU exports of poultry are provided assistance through export refunds that have been regulated under the URA since July 1, 1995. In 1997, 375,000 tons received EU export refunds (the maximum allowable under the URA), of which about three-quarters was allocated to French sales of whole broilers in the Middle East. The remaining one-quarter was mostly allocated to Dutch exports of chicken parts to Russia.<sup>128</sup> Unsubsidized exports reached almost 500,000 tons in 1997, increasing substantially from the 100,000 tons exported in 1994. These unsubsidized exports, consisting largely of chicken wings and legs, and lower-priced turkey parts, have been possible because of low internal EU grain prices, continued strong demand for chicken meat in Russia, a strong U.S. dollar, and a market strategy which consists of reserving available subsidies for uncompetitive cuts and products, while selling premium cuts at unsubsidized prices.<sup>129</sup>

In 1997, 281,000 tons of poultry were imported into the EU, representing about 3.5 percent of total consumption. About half of EU poultry imports consist of duck and geese, making up around 25 percent of total consumption of these products. Major suppliers of EU imports are Hungary, Brazil, China, Thailand, and Poland. Nearly all imports occur under limited access commitments, either TRQs established under the URA, or preferential access granted to Central European countries (Poland, Hungary, Slovakia, the Czech Republic, Bulgaria, Romania, and Slovenia) under the European Association Agreements.<sup>130</sup> Imports into the EU are also covered by a URA special safeguard clause, mainly affecting Thailand, China, Chile, and Argentina.

Apart from border protection through market access and export refunds, poultry meat qualifies for no specific support on the internal EU market.<sup>131</sup> However, several future policy changes could significantly impact the EU poultry sector and its role as a major competitor of the United States in international markets. For example, the EU poultry sector likely will be affected by

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<sup>125</sup> Source: Eurostat, 1997.

<sup>126</sup> Bovine Spongiform Encephalopathy (BSE), widely referred to as "mad cow disease," is a chronic degenerative disease affecting the central nervous system of cattle. The disease was first diagnosed in 1986 in Great Britain. BSE has resulted in trade restrictions on beef and products, including restraints on U.S. exports to the EU, even though the disease has never been diagnosed in the United States.

<sup>127</sup> USDA, FAS, *Poultry. Annual Report*, Brussels, AGR No. BE6536, Aug. 30, 1996, p. 2.

<sup>128</sup> USDA, FAS, *Poultry. Annual Report*, Brussels, AGR No. BE8504, Mar. 10, 1998, p. 5.

<sup>129</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 7.

<sup>130</sup> Under Association Agreements, a certain volume of imports from Central European countries can be imported at 20 percent of the MFN rate, on condition EU hygiene standards are met. Source: USDA, FAS, *Poultry. Annual Report*, Brussels, AGR No. BE8504, Mar. 10, 1998, p. 6.

<sup>131</sup> European Commission, *The Agricultural Situation in the European Union. 1995 Report*, Brussels, 1996, p. 108.

Agenda 2000, which involves continued reforms of EU agriculture.<sup>132</sup> If efforts to improve international competitiveness in the grains sector are successful, then the poultry sector likely will become increasingly competitive in world markets (feed represents about two-thirds of production costs in the EU). Another development is the accession of the first five East European countries (Poland, Hungary, the Czech Republic, Estonia, and Slovenia), which were declared eligible for membership by the EU.<sup>133</sup> While currently small producers, they have the potential to expand considerably in the future. The EU poultry sector is also likely to be significantly affected by future EU environmental and animal welfare legislation, which could add considerably to costs of production.<sup>134</sup>

## ***Brazil***

In 1997, Brazil ranked as the third-largest poultry producing and exporting country in the world (behind the United States and China). Encouraged by strong domestic and foreign demand, poultry production grew more than 8 percent annually during 1993-97, increasing from 3.2 million tons to 4.4 million tons (table A-24). Over the same period Brazilian poultry exports expanded at an even faster rate—almost 12 percent per annum—and, as the world's lowest cost producing country, Brazil represents a major competitor of the United States in international markets.<sup>135</sup>

Total Brazilian exports of poultry are divided nearly evenly between whole broilers and broiler parts, and Brazil generally exports to over 40 markets.<sup>136</sup> However, in 1997 about 75 percent of all broiler exports went to Saudi Arabia, Japan, Hong Kong, Russia, Kuwait, Argentina, and Arab Emirates. Most whole broiler shipments were made to Saudi Arabia and Russia, while Japan and Hong Kong accounted for most exports of broiler parts. However, trade sources report that Brazilian broiler exports to Asia became less competitive in 1997 and 1998 because of recent devaluations of Asian currencies.<sup>137</sup> New markets for Brazilian poultry include Russia and Iran, while promotional efforts are concentrating on Asia, Latin America, and Europe.<sup>138</sup> Thus, the United States and Brazil are direct competitors, especially in the Russian, Hong Kong, and Japanese markets.

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<sup>132</sup> The Agenda 2000 proposal deepens and extends the 1992 Common Agricultural Policy (CAP) reform through a further shift from price support to direct payments, and develops a coherent rural policy to accompany this process. For further information, see "Agenda 2000" - Agriculture, found at Internet address: <http://europa.eu.int/comm/agenda2000/index.htm>.

<sup>133</sup> USDA, FAS, *Europe. Situation and Outlook*, Jan. 1997

<sup>134</sup> "EU Commissioner's Views on Trade and Bird Welfare," *Poultry International*, Jan. 1997, p. 18.

<sup>135</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 3.

<sup>136</sup> "Brazil: North by Northwest," *Poultry International*, Sept. 1997, pp. 52-58.

<sup>137</sup> It is estimated that Thailand reduced its export prices to Japan by \$200 per ton, a drop in price that the Chinese were able to match but not the Brazilian exporters. Source: USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 7.

<sup>138</sup> USDA, FAS, *Poultry. Annual Report*, Brasilia, AGR No. BR7626, Aug. 15, 1997, p. 4.

Several factors make Brazilian poultry production highly competitive in international markets. The primary factor is the low cost of feed, which represents more than 50 percent of raw material cost of production in Brazil.<sup>139</sup> In addition, in recent years several large poultry production facilities have moved production facilities to the heart of the Brazilian grainbelt (located in the Center-West region of the country) and away from the traditional producing areas in the South and Southwest regions. Grain prices (mainly corn, soybeans, and sorghum) are reported to be 30 percent lower in the Central-West region compared with the South because of transportation differentials.<sup>140</sup> This expansion in the Center-West region has been encouraged by several local and state governments that offer poultry firms fiscal incentives (e.g., exemption from state value-added tax) for relocation.<sup>141</sup> The four major Brazilian poultry processors are currently investing over \$1 billion to expand and modernize processing facilities in the region.<sup>142</sup> These new facilities reportedly use state-of-the-art technology and are highly efficient by international standards. Efficiency is also improved by a concentration of production toward fewer, larger operations, and it is estimated that about three-quarters of the industry is vertically integrated.<sup>143</sup>

There are no identified government programs that directly subsidize either production or export of Brazilian poultry.<sup>144</sup> However, there is some indirect support through government financed investment incentives and export promotion initiatives. For example, in addition to the relocation incentives mentioned earlier, the Brazilian Government provides, through the National Development Bank, attractive market interest rates for long-term investments in poultry plants. Also, under PROEX, an export credit program, the Government provides interest rate guarantees to commercial banks which finance export sales, thus ensuring Brazilian broiler exporters financing at rates equivalent to those available internationally.<sup>145</sup> The Brazilian Government has also created APEX (a new export promotion agency) that may assist the poultry sector in developing new markets overseas. The Brazilian poultry industry also benefits from protection against imports, largely because of the lack of a poultry meat inspection agreement between Brazil and the United States.<sup>146</sup>

## ***Mexico***

Mexico produced 1.7 million tons of poultry in 1997, up 18 percent from the 1.4 million tons produced in 1993 (table A-24). Although production stagnated in 1995 and 1996 during the

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<sup>139</sup> Ibid, p. 2.

<sup>140</sup> "Brazil: North by Northwest," *Poultry International*, Sept. 1997, pp. 52-58.

<sup>141</sup> USDA, FAS, *Poultry. Semiannual Report*, Brasilia, AGR No. BR8601, Feb 1, 1998, p. 3.

<sup>142</sup> USDA, FAS, *Poultry. Annual Report*, Brasilia, AGR No. BR6623, Aug 15, 1996, p. 2.

<sup>143</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 3.

<sup>144</sup> USDA, FAS, *Poultry. Annual Report*, Brasilia, AGR No. BR7626, Aug. 15, 1997, p. 5.

<sup>145</sup> USDA, FAS, *Poultry. Semiannual Report*, Brasilia, AGR No. BR8601, Feb 1, 1998, p. 3.

<sup>146</sup> Recently Brazilian officials gave approval for U.S. poultry plants to export to Brazil prepared foods for home meal replacement which contain poultry products (e.g., frozen eggs rolls, frozen dinners). This represents a niche market to U.S. exporters because of the major increase in domestic demand for value-added products. Source: USDA, FAS, *Poultry. Annual Report*, Brasilia, AGR No. BR7626, Aug. 15, 1997, p. 5.

period of peso devaluation and economic instability, output rebounded in 1997, and the outlook for future growth is bright. Favorable prospects in Mexico are induced by moderate feed prices, a stable peso exchange rate, and continued economic growth.<sup>147</sup> About 10 percent of Mexico's poultry consumption is from imports, of which the United States is almost the sole supplier. Currently, Mexican exports of poultry are negligible,<sup>148</sup> although the Mexican Government is working closely with the USDA for certification of selected plants to export poultry to the U.S. market.<sup>149</sup>

While the Mexican poultry industry is not competitive with the United States, several factors indicate that its competitiveness may improve in the future. Feed costs represent about 60 percent of the total production cost for chicken meat in Mexico, and nearly 60 percent of total feedstuffs consumed by the poultry sector is imported. With the elimination of tariffs for imported feed grains in 1996, stabilization of the peso, and lower world feed grain prices in 1997 and 1998, costs have fallen considerably and boosted the profitability of poultry operations.<sup>150</sup>

Compared with the Mexican pork and beef industries, the poultry industry is the best organized, shows the greatest level of vertical and horizontal integration, and has the highest productivity. Government feed subsidies have encouraged vertical integration that in turn are reflected in increased production.<sup>151</sup> Other factors indicate improved efficiency in the Mexican poultry industry. For example, modern technology is widely used by domestic poultry firms at farm level, and genetics are usually sourced from the United States.<sup>152</sup> Mexico's poultry industry is also becoming more concentrated. Large firms are increasingly dominant,<sup>153</sup> with several small- and medium-sized firms going out of business during the economic crisis in the mid-1990s (largely due to the high cost of credit).<sup>154</sup> According to industry sources, the industry's concentration process is expected to continue in the medium-term.<sup>155</sup> Another trend is increased foreign investment by U.S. firms in the Mexican poultry industry. For example, Pilgrim's Pride de Mexico is an American-owned company with almost 12 percent of Mexican poultry production in 1997, while Trasgo, with an 8-percent share of production, has a joint venture with Tyson Foods.

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<sup>147</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 5.

<sup>148</sup> There are opportunities for Mexican importers to operate through the program of temporary imports for subsequent exports, under which U.S. raw poultry could be imported duty-free to be processed and re-exported back to the United States or to other international markets. Mexico's Sigma Alimentos, a major food processing company, plans to import 10,000 pounds per month from the United States and then sell it in the U.S. market under its own label. For further information, see "Mexico - Sigma Alimentos to export to U.S.," *Poultry International*, Apr. 1998, p. 12.

<sup>149</sup> USDA, FAS, *Poultry. Annual Report*, Mexico City, AGR No. MX7075, July 17, 1997, p. 4.

<sup>150</sup> Sorghum is the major feed used in poultry production. During the first half of 1996, Mexican sorghum prices fell almost 20 percent, largely because of the elimination of tariffs.

<sup>151</sup> "International Market Hold Potential for U.S. Meat," *Feedstuffs*, Vol. 70, No. 3, Jan. 19, 1998, p. 28.

<sup>152</sup> USDA, FAS, *Poultry. Semiannual Report*, Mexico City, AGR No. MX8011, Feb. 2, 1998, p. 5.

<sup>153</sup> The top 5 companies accounted for more than 50 percent of production in 1997.

<sup>154</sup> USDA, FAS, *Poultry. Annual Report*, Mexico City, AGR No. MX6105, July 30, 1996, p. 2.

<sup>155</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 5.

## *Japan*

Japan was the world's sixth-largest poultry producing country in 1997. Between 1993 and 1997, poultry output fell from 1.4 million tons to 1.2 million tons, declining annually by about 2.5 percent over the five-year period (table A-24). This downward trend in production is expected to continue in the future.<sup>156</sup> Japan is also a major world poultry consuming and importing country, and in 1997 imported over 500,000 tons (over 30 percent of its total consumption). With stagnant domestic production and growing consumer demand, Japanese poultry imports expanded rapidly between 1993 and 1997, increasing by almost 9 percent annually during this period. The leading supplier to the Japanese market is China, with close to a 40-percent share of the market, followed by the United States, Brazil, and Thailand, each with about a 20-percent market share.<sup>157</sup> Japan's exports of poultry meat are negligible and thus do not compete with the United States in international markets.

The structure of the poultry industry in Japan is changing rapidly, with a trend toward fewer and larger poultry farms. For instance, between 1995 and 1996, poultry production declined by only 1 percent, while the number of operations dropped by more than 6 percent. Medium- and large-scale producers with annual broiler shipments of 200,000 birds made up more than one-half of the total broilers shipped for finishing in 1995.<sup>158</sup> A similar trend toward fewer and larger firms is also taking place at the processor level.<sup>159</sup> Increased feed costs, which are caused by price increases of formula mix feeds, are driving inefficient operators and small-scale farms out of the market.<sup>160</sup>

About 60 percent of all poultry sales in Japan are through the food service industry, and the fastest growing segment in the Japanese retail food market is ready-to-serve meals. Typical chicken dishes found in supermarkets include "Yakitori," "Teriyaki," "Karaage," "Mushidori." Imported broiler cuts, mainly from China and Thailand, are heavily used to make such dishes, and increasingly processing of these ready-to-serve dishes is done in plants overseas. These sales packs are not labeled by country of origin or as an imported product.<sup>161</sup> Thus the major growing segment of the market is for high-valued products, which is highly labor intensive. Because Japanese producers have been at a competitive disadvantage when competing with imported high-valued products, domestic production has steadily declined over the past 5 years.

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<sup>156</sup> "Decline in Japan's Broiler Industry Offset by Imports," *Poultry International*, Dec. 1997, pp. 36-38.

<sup>157</sup> Problems of bird flu in Hong Kong and China could significantly change the pattern of poultry meat imports into Japanese market. For further information, see USDA, FAS, *Poultry. Voluntary Report*, Tokyo, AGR No. JA8001, Jan. 12, 1998.

<sup>158</sup> USDA, FAS, *Poultry. Annual Report*, Tokyo, AGR No. JA6038, Aug. 15, 1996, p. 5.

<sup>159</sup> "Japan - Further Decline in Number of Farms," *Poultry International*, Nov. 1997, p. 25.

<sup>160</sup> USDA, FAS, *Poultry. Annual Report*, Tokyo, AGR No. JA6038, Aug. 15, 1996, p. 5.

<sup>161</sup> USDA, FAS, *Poultry. Annual Report*, Tokyo, AGR No. JA7030, Aug. 20, 1997, p. 2.

## *Thailand*

Between 1993 and 1997, Thailand's poultry production increased from 685,000 tons to 975,000 tons, an annual average growth of about 9 percent (table A-24). Over the same period, exports expanded from 163,000 tons to 187,000 tons, making Thailand the world's fifth-largest poultry exporting country. During 1993-97, approximately three-quarters of Thailand's exports were shipped to Japan, with most of the remaining 25 percent shared between the EU and Singapore. Thai exports to the EU market have grown significantly since late 1996 when the EU introduced a ban on poultry imports from China. While most exports consist of uncooked broiler meat, Thai exporters increasingly have developed and exported high-valued broiler meat products. Between 1993 and 1997, exports of further processed meat increased from 950 tons to 41,000 tons, while exports of uncooked poultry declined by 13 percent.<sup>162</sup> There are about 20-30 varieties of these products, which mainly come in three forms: deep fried, steamed, and roasted. In addition, processed meats are usually seasoned with other food ingredients before cooking, such as marinade, batter and breading, spice or sauce mixes.<sup>163</sup> Typically, high-valued products fetch more than double the price of uncooked products in export markets.

The Thai poultry industry is characterized by production and processing technology equivalent to that of the United States, a supply of skilled labor in broiler processing,<sup>164</sup> and an efficient industry structure. One company, Chareon Pokhand, accounts for more than 70 percent of total poultry production.<sup>165</sup> Consequently, Thailand is highly competitive in international markets. However, the sector is losing its advantage of having low production costs to countries like Brazil, China, and the United States. This is because of the relatively higher prices currently being paid for imported feed ingredient, as domestically-produced ingredients do not meet the industry's requirements in terms of quantity or quality<sup>166</sup> (although imported corn represents only 10 percent of domestic feed consumption, imported soybeans and meal account for over 80 percent of the industry's protein requirements).<sup>167</sup> The problem of increasing production costs are mainly attributed to stagnant or decreased production of feed ingredients (i.e., corn and soybean meal), and because of Thai Government import controls on these feedstuffs through strict TRQs aimed at protecting local feed ingredient farmers.<sup>168</sup> However, recent liberalization of grain markets has eased feed prices somewhat, while the Ministry of Finance has refunded import duties on feed ingredients used in producing poultry meat for export.<sup>169</sup> Another problem affecting Thailand's international competitiveness is rising wages, which threaten Thailand's competitiveness in exports of deboned cuts, the production of which is highly labor intensive. Thailand is already losing market share in this market to low-wage countries, such

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<sup>162</sup> USDA, FAS, *Poultry. Semiannual Report*, Bangkok, AGR No. TH8014, Feb. 4, 1998, pp. 4-5.

<sup>163</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 5.

<sup>164</sup> USDA, FAS, *Poultry. Annual Report*, Bangkok, AGR No. TH6082, Aug. 1, 1996, p. 4.

<sup>165</sup> "Thailand's 750 m Broilers," *Poultry International*, Nov. 1996, pp. 32-33.

<sup>166</sup> "Thailand: Broiler Industry to Expand," *Poultry International*, Mar. 1997, p. 24.

<sup>167</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 4.

<sup>168</sup> USDA, FAS, *Poultry. Annual Report*, Bangkok, AGR No. TH6082, Aug. 1, 1996, p. 4.

<sup>169</sup> USDA, FAS, *Poultry. Annual Report*, Bangkok, AGR No. TH7086, Aug. 14, 1997, p. 6.

as China.<sup>170</sup> In addition, production cost increases are being driven by a shortage of farm labor, limited farm land, and increased environmental problems.<sup>171</sup>

The nearly 50 percent devaluation of the Thai currency (the baht) has raised questions about the outlook for the Thai poultry complex over the next few years.<sup>172</sup> The immediate impact will be to increase the competitiveness of Thai product, especially in the very price-sensitive Japanese market. In particular, the devaluation has improved Thai's competitiveness in the Japanese market for deboned leg products vis-à-vis China. However, substantial increases in imported feedstuff prices (both due to high international prices and the devaluation of the baht) could constrain the ability of the Thai industry to expand production.<sup>173</sup> Considerable uncertainty surrounds the production outlook for Thailand, as well as the devaluation's effect on consumers' real income and consumption prospects. Continued high inflation and loss of real incomes reduces domestic consumption, resulting in increased product available for export.

### *Other*

Between 1993 and 1997, poultry production in Canada increased from 766,000 tons to 914,000, an average annual growth of 4.6 percent. Over the same time period, exports increased rapidly, from almost nothing in 1993 to 74,000 tons in 1997. In recent years about one-third of Canadian poultry exports have been shipped to Cuba—a market from which U.S. producers are excluded because of economic sanctions<sup>174</sup>—while nearly 50 percent of the remainder is accounted for by China, Hong Kong, and Russia, and are in direct competition with U.S. product.<sup>175</sup> Canadian imports of poultry are sourced exclusively from the United States and subject to strict TRQs negotiated under the NAFTA.<sup>176</sup>

The Canadian poultry industry is heavily regulated by the Government.<sup>177</sup> Production is controlled through a supply management system, in which provincial marketing boards determine the overall level of production and allocate production quotas to individual farmers.<sup>178</sup> Through production controls and restricted imports, Canadian poultry prices are significantly higher than world price levels, thus limiting opportunities to export. However, some exports have been supported through a new export policy run by provincial boards and overseen by the

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<sup>170</sup> "Thailand: Broiler Industry to Expand," *Poultry International*, Mar. 1997, p. 24.

<sup>171</sup> USDA, FAS, *Poultry. Annual Report*, Bangkok, AGR No. TH6082, Aug. 1, 1996, p. 4.

<sup>172</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 4.

<sup>173</sup> *Ibid.*

<sup>174</sup> For further information on U.S. unilateral economic sanctions and how they impact the U.S. agricultural industry, see U.S. International Trade Commission, *Overview and Analysis of Current U.S. Unilateral Economic Sanctions*, Investigation No. 332-391, Publication 3124, Aug. 1998.

<sup>175</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Mar. 1998, p. 8.

<sup>176</sup> USDA, FAS, *Poultry. Annual Report*, Ottawa, AGR No. CA7046, Aug. 18, 1997, p. 8.

<sup>177</sup> "Changes in Canada's Industry," *Poultry International*, Dec. 1997, pp. 34-40.

<sup>178</sup> As of April 1998, the Chicken Farmers of Canada are implementing a new national production allocation system for chicken. The new complex system of chicken production allocation groups the provinces into Eastern, Central, and Western regions and puts limits on regional production increases.

industry group, Chicken Farmers of Canada. This policy was implemented to alleviate the shortage of white meat as a result of growing demand for further-processed chicken items, and because the demand for white meat outstrips is greater than processors can produce from their allocation of chickens within the production system.<sup>179</sup> This program allows processors to negotiate with individual farmers on volume and price for additional chicken for export provided they move lower-valued cuts (legs, backs, etc.) into export channels.<sup>180</sup> Participating processors can capitalize on the high domestic price for the white meat portion of the “export chicken” enabling them to export the lower-valued cuts at low world prices.

South Africa is a large producer of poultry meat with output of 887,000 tons in 1997, compared with 641,000 tons in 1993. This rapid production growth (more than 8 percent annually during 1993-97) has been largely in response to increased consumption, which rose almost 10 percent annually over the same period.<sup>181</sup> The South African poultry production process uses modern technology and has an efficient structure with six firms producing close to 80 percent of total output in 1997. However, in 1993 and 1994, an outbreak of Newcastle disease led to a slower production growth rate. Also, although the broiler industry operates without Government controls, feed production and prices are subject to strict Government intervention that keeps feed prices high, thus impacting poultry sector competitiveness.<sup>182</sup>

To meet growing domestic demand, poultry imports increased to 70,000 tons in 1997, compared with only 26,000 tons 5 years earlier. The United States has been a major beneficiary of this growth, and in 1996 more than one-half of South African poultry imports were sourced from the United States.<sup>183</sup> South African exports are negligible, with a small volume shipped to nearby African markets (e.g., Mozambique, Angola, and Zimbabwe), and do not represent competition for U.S. poultry products in international markets.

Broiler production in Russia has been declining in recent years. In 1997, production was only 54 percent of the 1993 levels, dropping from 1.3 million tons to 705,000 tons over the 5-year period. However, total (and per-capita) broiler consumption significantly increased during the same period, from 1.5 million tons in 1993 to 1.9 million tons in 1997 (an average annual growth rate of over 6 percent). As a result of lower production and strong demand, imports rose six-fold between 1993 and 1997, reaching 1.2 million tons in 1997. Russian exports of poultry are negligible.

The crisis of the Russian poultry industry can be attributed to several factors, including: high price and poor quality of feed; low genetic potential of most domestic poultry breeds; lack of integration between poultry factories, breeding farms, processing facilities, and feed plants; poor technology and high-cost processing infrastructure; reliance by managers on government subsidies and other financial assistance; poor management; and inefficient use of labor resources.<sup>184</sup> Because of such factors the average weight gain for birds in Russia is 15-20 grams

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<sup>179</sup> USDA, FAS, *Poultry. Semiannual Report*, Ottawa, AGR No. CA8005, Jan. 27, 1998, p. 4.

<sup>180</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 5.

<sup>181</sup> USDA, FAS, *Poultry. Annual Report*, Pretoria, AGR No. SF6024, July 31, 1996, p. 1.

<sup>182</sup> USDA, FAS, *Poultry. Annual Report*, Pretoria, AGR No. SF7027, Aug. 4, 1997, p. 6.

<sup>183</sup> *Ibid*, p. 18.

<sup>184</sup> USDA, FAS, *Poultry. Voluntary Report*, Moscow, AGR No. RS6039, June 5, 1996, p. 5.

per day, compared with an average of 40 grams per day in the United States, and broiler meat production in Russia is estimated to cost \$2.15 per kilogram, nearly double that of imported products.<sup>185</sup> Russian producers have had to close 40 of the 124 Russian broiler production facilities during 1996-97, and another 60 operating facilities have decreased production by 70 percent.<sup>186</sup>

Prospects for improvement in the production outlook in Russia are not optimistic. However, certain financially strong Russian or foreign companies are increasing production. Foreign companies have invested in poultry plants in numerous oblasts (territorial administrative divisions). There is also a U.S.-Russian project where the U.S. industry will establish a partnership with Russian producers and develop a broiler facility that will serve as a model for the rest of the Russian industry.<sup>187</sup>

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<sup>185</sup> USDA, FAS, *Poultry. Annual Report*, Moscow, AGR No. RS7036, July 30, 1997, p. 4.

<sup>186</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Oct. 1997, p. 3.

<sup>187</sup> "Russia: Concern About U.S. Investment Proposals," *Poultry International*, Oct. 1997, pp. 18-19.

**APPENDIX A**  
**STATISTICAL TABLES**

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**Table A-1****U.S. poultry farms: Number reporting sales of live poultry, by type, 1987 and 1992**

Type	1987	1992	Decline percent
Laying hens and pullets .....	18,831	13,897	26.2
Broilers and other meat-type chickens .....	27,645	23,949	13.4
Turkeys .....	7,347	6,257	14.8
Ducks, geese, and other poultry .....	8,567	6,768	21.0
Total .....	62,390	50,871	18.5

Source: U.S. Department of Commerce, Bureau of Census, *1992 Census of Agriculture*, Vol. 1 Geographic Area Series, Part 51 United States Summary and State Data, table 20, p. 26.

**Table A-2****Poultry: Number of federally inspected plants, by types as of Sept. 30 of 1993-97**

Type	1993	1994	1995	1996	1997 <sup>1</sup>
Poultry only:					
Slaughtering .....	146	120	114	118	117
Processing .....	196	182	174	171	168
Slaughtering and processing .....	129	152	162	163	165
Total .....	471	454	450	452	450
Meat and poultry:					
Slaughtering .....	0	0	0	1	1
Processing .....	3,010	3,013	3,035	3,091	3,119
Slaughtering and processing .....	374	369	381	398	406
Total .....	3,384	3,382	3,416	3,490	3,526

<sup>1</sup> USITC staff estimate.

Source: USDA, FSIS, *Meat and Poultry Inspection, Report of the Secretary of Agriculture to the U.S. Congress*, table 3.3, various years.

**Table A-3****Poultry: Industry concentration in the broiler and turkey sectors, 1993-97**

(Share of production, in percent)

Item	1993	1994	1995	1996	1997
Broilers:					
Top 4 firms .....	40	40	46	44	44
Top 8 firms .....	55	45	61	61	62
Top 20 firms .....	78	75	84	84	85
Turkeys:					
Top 4 firms .....	38	41	40	40	41
Top 8 firms .....	63	65	66	66	65
Top 20 firms .....	95	96	96	97	96

Source: *Broiler Industry and Turkey World*, various issues.

**Table A-4**

**Poultry: U.S. broiler, turkey, and all poultry production, by major region and state, 1993-97**

*(Million pounds live weight)*

<b>Product/region</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
<b>Broilers:</b>					
Delmarva Peninsula .....	3,752	3,868	3,951	4,046	4,049
Delaware .....	1,295	1,369	1,394	1,417	1,417
Maryland .....	1,332	1,311	1,360	1,386	1,413
Virginia .....	1,124	1,188	1,197	1,244	1,219
Southeast .....	13,953	14,837	15,746	16,497	17,234
Georgia .....	4,416	4,724	5,136	5,655	5,914
Alabama .....	3,970	4,184	4,230	4,192	4,350
North Carolina .....	3,138	3,218	3,418	3,542	3,657
Mississippi .....	2,430	2,712	2,962	3,109	3,313
South Central .....	6,238	6,523	6,730	7,546	7,683
Arkansas .....	4,615	4,854	4,983	5,660	5,590
Texas .....	1,623	1,670	1,747	1,886	2,093
Other States .....	6,675	7,301	7,795	8,397	8,557
U.S. Total .....	30,618	32,529	34,222	36,486	37,523
<b>Turkeys:</b>					
South Atlantic .....	2,082	2,093	2,185	2,335	2,309
North Carolina .....	1,366	1,362	1,420	1,458	1,354
Virginia .....	393	409	442	475	485
South Carolina .....	195	173	185	281	368
West Virginia .....	80	104	90	87	87
Georgia .....	44	42	44	17	6
Maryland/Delaware .....	4	3	5	7	9
West North Central .....	2,107	2,221	2,329	2,526	2,586
Minnesota .....	815	847	855	948	1,026
Missouri .....	447	478	551	579	590
Indiana .....	334	336	335	351	352
Ohio .....	158	176	192	227	218
Iowa .....	231	250	227	222	188
South Dakota .....	75	76	87	99	102
Kansas .....	26	34	45	49	52
North Dakota .....	20	24	37	51	58
Other States .....	2,244	2,296	2,264	2,372	2,321
Total U.S. ....	6,433	6,610	6,779	7,233	7,216

**Table A-4** —Continued

**Poultry: U.S. broiler, turkey, and all poultry production, by major region and state, 1993-97**

(Million pounds live weight)

<b>Product/region</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
All poultry:					
Arkansas .....	5,127	5,364	5,621	6,283	6,194
Georgia .....	4,563	4,868	5,269	5,781	6,027
North Carolina .....	4,583	4,670	4,922	5,081	5,080
Alabama .....	4,038	4,249	4,288	4,253	4,416
Mississippi .....	2,464	2,745	2,989	3,137	3,348
Maryland/Delaware .....	2,655	2,712	2,784	2,830	2,853
Other States .....	14,584	15,553	16,068	17,274	17,757
U.S. Total .....	38,015	40,161	41,941	44,640	45,674

Source: USDA, NASS, *Poultry Production and Value*, 1995 and 1997 issues.

**Table A-5**

**U.S. poultry processing industry: Employment and earnings, 1993-97**

<b>Item</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b> <sup>1</sup>
Employment:			(1,000 persons)		
Total employees .....	216.7	224.3	235.4	238.4	241.4
Production workers .....	193.4	199.0	209.4	212.4	215.4
Earnings:			(Dollars)		
Average weekly earnings .....	288.34	303.02	311.56	314.88	318.24
Average hourly earnings .....	7.47	7.73	8.03	8.20	8.37

<sup>1</sup> USITC estimate.

Source: American Meat Institute, *1997 Meat and Poultry Facts*, Washington, D.C., p. 32

**Table A-6****Broilers: Share of processors' shipments to various market channels, 1981, 1989, 1991, 1993, and 1995**

	(Percent)				
Market channel	1981	1989	1991	1993	1995
Retail grocery stores .....	60.2	47.5	45.0	35.3	37.1
Public eating places:					
Fast food restaurants .....	15.5	18.2	13.7	14.4	12.4
All other .....	4.6	7.7	8.3	10.3	9.2
Total, public eating places .....	20.1	25.9	22.0	24.7	21.6
Brokers, renderers, pet food, and other .....	1.7	13.8	14.3	17.2	15.4
Further processors .....	6.8	7.4	6.7	7.5	7.6
Exports .....	7.1	3.5	7.3	7.9	15.7
Government .....	1.8	1.2	1.8	1.0	0.5
Other institutions .....	2.3	0.7	2.9	6.4	2.1
Total .....	100.0	100.0	100.0	100.0	100.0

Source: National Broiler Council, *Broiler Industry Marketing Practices, Calendar Year 1995*, Washington, DC, p. 6.

**Table A-7****Poultry: Prices, by product, 1993-97**

	(Cents per pound)				
	1993	1994	1995	1996	1997
Average price received by farmers <sup>1</sup>					
Broiler .....	34.43	35.03	34.62	38.30	37.38
Turkey .....	38.99	40.74	41.08	43.51	39.93
Wholesale <sup>2</sup>					
Broilers					
12-city average, RTC .....	55.18	55.80	56.35	61.25	58.81
Georgia dock .....	53.65	54.40	54.73	61.09	59.96
Northeast					
Breast, boneless .....	203.50	184.50	173.12	176.44	171.78
Breast, ribs on .....	100.35	86.62	85.16	88.20	85.82
Legs, whole .....	36.46	49.21	52.81	56.90	48.40
Legs, quarters .....	25.15	32.90	36.54	40.51	31.34
Turkey					
Eastern region					
Toms, 14-22 lbs .....	64.51	66.49	66.61	67.97	63.32
Hens, 8-16 lbs .....	62.55	65.65	66.36	66.49	64.94
Drumsticks .....	26.48	32.68	25.54	29.35	31.03
Wings, full cut .....	26.00	30.26	28.10	36.28	37.16
Retail price (U.S. average) <sup>2</sup>					
Broiler					
Composite .....	144.01	145.02	143.68	150.52	150.91
Whole, fresh .....	89.02	90.09	91.67	97.27	100.19
Breast, bone-in .....	207.80	206.10	198.38	203.00	203.86
Leg, bone-in .....	110.40	113.10	115.83	124.03	123.43
Whole turkey, frozen .....	100.09	100.03	102.37	104.33	105.06

Source: <sup>1</sup> USDA, NASS, *Agricultural prices*, monthly reports, various issues; <sup>2</sup> USDA, ERS, *Livestock, Dairy, and Poultry*, monthly reports, various issues.

**Table A-8**  
**Frozen poultry: Quantity, mean bonus, and mean bonus per ton, under Export Enhancement Program, fiscal years 1986-97**

<b>Fiscal year<sup>1</sup></b>	<b>Quantity</b>	<b>Average bonus</b>	<b>Bonus per ton</b>
	<i>(1,000 tons)</i>	<i>(Million dollars)</i>	<i>(Dollars per ton)</i>
1986 .....	43.0	31.9	742.26
1987 .....	94.5	60.3	638.21
1988 .....	13.8	6.8	494.12
1989 .....	7.8	3.8	486.33
1990 .....	18.0	10.8	601.46
1991 .....	19.8	10.4	524.27
1992 .....	25.9	14.4	555.92
1993 .....	7.3	4.5	613.89
1994 .....	27.8	20.7	743.36
1995 .....	40.2	20.8	517.44
1996 .....	11.1	5.2	463.18
1997 .....	0.0	0.0	0.00
19982 .....	0.0	0.0	0.00
<b>Total .....</b>	<b>309.4</b>	<b>189.6</b>	<b>612.92</b>

<sup>1</sup> EEP is reported on a fiscal year basis (July 1 - June 30). Thus fiscal year 1986, for example, ran from July 1, 1985 to June 30, 1986.

<sup>2</sup> First 6 months of fiscal year (July 1 - Dec. 31 1997)

Source: USDA, FAS.

**Table A-9**  
**Poultry and red meat: U.S. per capita consumption, by item, 1970, 1975, 1980, 1985, 1990, and 1997**

<b>Meat type</b>	<i>(Pounds retail weight)</i>					
	<b>1970</b>	<b>1975</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1997</b>
Chicken .....	40.1	38.8	47.3	52.4	60.7	74.0
Turkey .....	7.9	8.3	9.9	11.2	17.0	17.6
Beef .....	84.4	88.0	76.4	79.1	67.6	66.9
Veal .....	2.5	3.4	1.5	1.9	1.1	1.2
Lamb .....	2.9	1.8	1.4	1.4	1.4	1.1
Pork .....	55.2	43.1	56.8	51.5	49.4	48.7
<b>Total .....</b>	<b>193.0</b>	<b>183.4</b>	<b>193.3</b>	<b>197.5</b>	<b>197.2</b>	<b>209.5</b>
	<i>(Percent)</i>					
Chicken .....	20.8	21.2	24.5	26.5	30.8	35.3
Turkey .....	4.1	4.5	5.1	5.7	8.6	8.4
Beef .....	43.7	48.0	39.5	40.1	34.3	31.9
Veal .....	1.3	1.9	0.8	1.0	0.6	0.6
Lamb .....	1.5	1.0	0.7	0.7	0.7	0.5
Pork .....	28.6	23.5	29.4	26.1	25.1	23.2
<b>Total .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: USDA, ERS, *Food Consumption, Prices, and Expenditures, 1970-95*, tables 44-56, pp. 81-93, Aug. 1997; and USDA, ERS, *Livestock, Dairy, and Poultry*, May 21, 1998.

**Table A-10****Live poultry and poultry meat: Value of U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1993-97**

Year	U.S. shipments <sup>1</sup>	U.S. exports <sup>2</sup>	U.S. imports <sup>2</sup>	Apparent U.S. consumption	Ratio of imports to U.S. consumption
	----- (Million dollars) -----				(Percent)
1993 .....	13,022	1,229	24	11,817	0.18
1994 .....	14,093	1,691	23	12,425	0.16
1995 .....	14,600	2,149	31	12,482	0.21
1996 .....	17,095	2,589	35	14,541	0.20
1997 .....	17,105	2,515	43	14,633	0.25

<sup>1</sup> U.S. shipments based on sum of (i) broilers, (ii) turkeys, (iii) other chickens. U.S. shipments do not include geese, ducks, guineas etc. (trade data do include these items).

<sup>2</sup> U.S. exports and imports from table A-15.

Source: U.S. shipments data from USDA, NASS, *Poultry - Production and Value, 1997 Summary*, April 1998; and trade data from official statistics of the U.S. Department of Commerce.

**Table A-11****Live Poultry: Volume of U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1993-97**

Year	U.S. shipments <sup>1</sup>	U.S. exports <sup>2</sup>	U.S. imports <sup>3</sup>	Apparent U.S. consumption	Ratio of imports to U.S. consumption
	----- (Million birds) -----				(Percent)
1993 .....	7,933	62	7	7,878	0.09
1994 .....	8,262	68	7	8,201	0.08
1995 .....	8,651	61	7	8,598	0.09
1996 .....	8,811	50	8	8,770	0.09
1997 .....	9,050	57	9	9,003	0.10

<sup>1</sup> U.S. shipments based on sum of (i) broiler-type chicks hatched, (ii) poultz placed in U.S., and (iii) replacement chicks hatched. U.S. shipments do not include geese, ducks, guineas etc. (trade data do include these items).

<sup>2</sup> U.S. exports from table A-22.

<sup>3</sup> U.S. imports from table A-17.

Source: U.S. shipment data from USDA, ERS, *Agricultural Outlook*, table 13 - Poultry & Eggs, various issues; and trade data from official statistics of the U.S. Department of Commerce.

**Table A-12****Poultry meat: Volume of U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1993-97**

Year	U.S. shipments <sup>1</sup>	U.S. exports <sup>2</sup>	U.S. imports <sup>3</sup>	Apparent U.S. consumption	Ratio of imports to U.S. consumption
	----- (Million pounds ready-to-cook weight) -----				(Percent)
1993 .....	27,328	2,372	9	24,965	0.04
1994 .....	29,112	3,350	7	25,769	0.03
1995 .....	30,392	4,499	11	25,904	0.04
1996 .....	32,016	5,265	11	26,762	0.04
1997 .....	32,963	5,655	14	27,322	0.05

<sup>1</sup> U.S. shipments based on ready-to cook weight. U.S. shipments do not include geese, ducks, guineas etc. (trade data do include these items).

<sup>2</sup> U.S. exports from table A-23.

<sup>3</sup> U.S. imports from table A-18.

Source: U.S. shipment data from USDA, ERS, *Agricultural Outlook*, table 10 - U.S. Meat and Use, various issues; and trade data from official statistics of the U.S. Department of Commerce.

**Table A-13**  
**Broilers: International production performance and cost comparison, 1995**

<b>Performance data/cost</b>	<b>United States</b>	<b>Brazil</b>	<b>China</b>	<b>Thailand</b>	<b>France</b>	<b>Netherlands</b>	<b>Japan</b>	<b>Russia</b>	<b>Saudi Arabia</b>
Performance data									
Stocking density (birds per square meter) . . . . .	14	10-12	15-16	8-12	16-25	23	12-15	18	17
Killing day (days) . . . . .	46	45	45-49	42-44	41	43	50-55	45-64	42
Killing weight, live (pounds)	2	1.8-2.2	2.0-2.5	1.8-2.0	1.7-2.0	1.85	2.7-2.9	1.2-1.8	1.5
Mortality (percent) . . . . .	5	5	5	5.7	3.0-7.5	4.9	3	4.5-2.0	8
Feed conversion ratio (pounds feed per pound of weight gain) . . . . .	2	2	2.1-2.2	1.9-2.1	1.8-2.0	1.86	2.1-2.3	2.7-4.3	2.1
Feed cost/tons (U.S. dollars) . . . . .	176	165	289	280	315	384	415	287	347
Growing costs per pound <span style="float: right;">(Cents per pound)</span>									
Feed . . . . .	16.0	13.6	26.2	27.2	27.8	30.3	43.0	58.6	50.6
Chick . . . . .	3.8	6.4	2.0	2.5	7.5	9.3	12.4	8.4	24.2
Labor and catching . . . . .	3.6	2.0	1.0	5.0	2.7	4.1	4.3	3.3	12.1
Other . . . . .	2.3	1.0	5.0	1.0	2.7	5.2	21.0	13.4	12.1
Total before fixed costs . . .	25.7	23.0	34.2	35.7	40.7	48.9	80.7	83.7	99.0
Wholesale price (cents/lb) .	55.8	42.6	60.3	63.5	93.0	88.0	147.9	120.2	171.9

Source: USITC estimates based on "Broilermeat Production Cost Comparison," *Poultry international*, Jan. 1996, pp. 24-28.

**Table A-14**  
**Poultry: U.S. supply and use, 1970, 1980, 1990, and 1993-97**

Product	1970	1980	1990	1993	1994	1995	1996	1997
<b>Broilers</b>								
	<i>(Million pounds ready-to-cook weight)</i>							
Beginning stocks . . . . .	82	112	221	368	358	458	560	641
Production . . . . .	7,687	11,252	18,430	22,015	23,666	24,827	26,124	27,041
Imports . . . . .	0	0	0	0	0	1	3	5
Exports . . . . .	94	567	1,143	1,966	2,876	3,894	4,420	4,664
Ending stocks . . . . .	112	115	242	358	458	560	641	607
Consumption . . . . .	7,563	10,682	17,266	20,059	20,690	20,832	21,626	22,416
Per capita consumption . . . . .	36	46	59	69	70	69	71	73
	<i>(Percent)</i>							
Ratio of exports to production . . .	1.2	5.0	6.2	8.9	12.2	15.7	16.9	17.2
Ratio of imports to consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Turkey</b>								
	<i>(Million pounds ready-to-cook weight)</i>							
Beginning stocks . . . . .	192	240	236	272	249	254	271	328
Production . . . . .	1,729	2,370	4,515	4,798	4,937	5,069	5,401	5,412
Imports . . . . .	0	0	0	0	0	2	1	1
Exports . . . . .	35	75	54	244	280	348	438	598
Ending stocks . . . . .	219	198	306	249	254	271	328	415
Consumption . . . . .	1,667	2,337	4,390	4,577	4,652	4,706	4,906	4,727
Per capita consumption . . . . .	8	10	18	18	18	18	19	18
	<i>(Percent)</i>							
Ratio of exports to production . . .	2.0	3.2	1.2	5.1	5.7	6.9	8.1	11.1
Ratio of imports to consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Other chicken</b>								
	<i>(Million pounds ready-to-cook weight)</i>							
Beginning stocks . . . . .	28	30	6	10	8	14	7	6
Production . . . . .	778	551	523	515	509	496	491	510
Imports . . . . .	0	0	0	0	0	3	0	0
Exports . . . . .	3	53	25	56	90	99	265	384
Ending stocks . . . . .	52	21	9	8	14	7	6	7
Consumption . . . . .	751	507	496	461	413	406	228	125
Per capita consumption . . . . .	4	2	2	2	2	2	1	1
	<i>(Percent)</i>							
Ratio of exports to production . . .	0.4	9.6	4.8	10.9	17.7	20.0	54.0	75.3
Ratio of imports to consumption	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0

**Table A-14—Continued**  
**Poultry: U.S. supply and use, 1970, 1980, 1990, and 1993-97**

Product	1970	1980	1990	1993	1994	1995	1996	1997
<i>(Million pounds ready-to-cook weight)</i>								
All poultry								
Beginning stocks . . . . .	302	382	463	650	615	726	838	975
Production . . . . .	10,194	14,173	23,468	27,328	29,112	30,392	32,016	32,963
Imports . . . . .	0	0	0	0	0	6	4	6
Exports . . . . .	132	695	1,222	2,266	3,246	4,341	5,123	5,646
Ending stocks . . . . .	383	334	557	615	726	838	975	1,029
Consumption . . . . .	9,981	13,526	22,152	25,097	25,755	25,944	26,760	27,268
Per capita consumption . . . . .	48	58	79	89	90	89	91	92
<i>(Percent)</i>								
Ratio of exports to production . . .	1.3	4.9	5.2	8.3	11.2	14.3	16.0	17.1
Ratio of imports to consumption	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2

Source: USDA, ERS, *Poultry Yearbook*, Dec. 1995; and USDA, ERS, *Agricultural Outlook*, June-July 1998, table 10, p. 37.

Table A-15

Poultry: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected country and country group, 1993-97<sup>1</sup>

	(1,000 dollars)				
Item/country (group)	1993	1994	1995	1996	1997
U.S. exports of domestic merchandise					
Russia .....	83,502	309,910	606,622	912,705	780,978
Hong Kong .....	171,221	274,706	403,186	419,952	430,652
Canada .....	195,241	191,865	195,782	193,170	230,440
Mexico .....	213,606	236,731	170,881	213,183	231,183
Japan .....	146,508	176,333	174,994	175,112	137,930
Lativa .....	4,188	378	1,314	72,866	93,424
Poland .....	35,226	51,071	47,558	56,688	54,656
China .....	25,383	31,398	43,256	66,693	58,992
South Africa .....	1,325	11,701	30,773	25,703	44,472
Singapore .....	29,082	39,895	38,252	38,252	29,528
Other .....	324,104	366,742	436,051	414,481	422,637
Total .....	1,229,386	1,690,730	2,148,669	2,588,805	2,514,892
Latin America .....	330,268	356,937	317,653	367,459	416,549
APEC .....	825,221	1,005,762	1,089,514	1,167,499	1,182,192
ASEAN .....	46,544	61,857	62,574	58,537	53,626
CBERA .....	79,310	80,287	93,622	103,002	128,800
Eastern Europe .....	55,457	78,206	66,193	63,002	65,002
EU-15 .....	50,714	62,713	55,193	62,252	48,123
OPEC .....	55,071	48,681	53,845	39,795	35,579
Pacific Rim .....	415,326	575,570	723,056	760,995	720,335
Sub-Sahara Africa .....	2,548	12,333	32,585	28,146	49,250
U.S. imports for consumption					
Russia .....	0	0	0	0	0
Hong Kong .....	590	165	538	518	430
Canada .....	17,938	18,575	27,269	31,237	39,176
Mexico .....	0	0	0	0	0
Japan .....	0	0	0	6	0
Lativa .....	0	0	0	0	0
Poland .....	0	0	0	0	6
China .....	0	365	0	5	0
South Africa .....	133	14	3	0	0
Singapore .....	0	0	0	0	0
Other .....	4,892	3,435	2,967	3,016	3,054
Total .....	23,553	22,554	30,777	34,782	42,666
Latin America .....	3	0	0	0	141
APEC .....	18,670	19,105	27,807	31,790	39,833
ASEAN .....	13	0	0	12	0
CBERA .....	3	0	0	0	0
Eastern Europe .....	0	0	0	77	68
EU-15 .....	2,346	2,172	2,350	1,524	1,221
OPEC .....	0	0	0	0	0
Pacific Rim .....	731	530	538	553	516
Sub-Sahara Africa .....	133	14	3	0	0

**Table A-15—Continued**

**Poultry: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected country and country group, 1993-97<sup>1</sup>**

(1,000 dollars)

<b>Item/country (group)</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
U.S. merchandise trade balance					
Russia .....	83,502	309,910	606,622	912,705	780,978
Hong Kong .....	170,631	274,541	402,648	419,434	430,222
Canada .....	177,303	173,290	168,513	161,933	191,264
Mexico .....	213,606	236,731	170,881	213,183	231,183
Japan .....	146,508	176,333	174,994	175,106	137,930
Lativa .....	4,188	378	1,314	72,866	93,424
Poland .....	35,226	51,071	47,558	56,688	54,650
China .....	25,383	31,033	43,256	66,688	58,992
South Africa .....	1,192	11,687	30,770	25,703	44,472
Singapore .....	29,082	39,895	38,252	38,252	29,528
Other .....	319,212	363,307	433,084	411,465	419,583
<b>Total .....</b>	<b>1,205,833</b>	<b>1,668,176</b>	<b>2,117,892</b>	<b>2,554,023</b>	<b>2,472,226</b>
Latin America .....	330,265	356,937	317,653	367,459	416,408
APEC .....	806,551	986,657	1,061,707	1,135,709	1,142,359
ASEAN .....	46,531	61,857	62,574	58,525	53,626
CBERA .....	79,368	80,287	93,622	103,002	128,800
Eastern Europe .....	55,071	78,206	66,193	62,925	64,934
EU-15 .....	48,368	60,541	52,843	60,728	46,902
OPEC .....	55,071	48,681	53,845	39,795	35,579
Pacific Rim .....	414,595	575,040	722,518	760,442	719,819
Sub-Saharan Africa .....	2,415	12,319	32,582	28,146	49,250

<sup>1</sup> Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export.

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table A-16**  
**Poultry: Composition of U.S. imports, 1993-97**

	(1,000 dollars)				
Product	1993	1994	1995	1996	1997
Live chicken, not over 185 grams . . . . .	994	1244	1016	2,106	4,296
Live poultry, other than chicken, not over 185 grams	8,145	9,517	10,158	11,658	13,416
Live chicken, over 185 grams . . . . .	68	66	514	470	399
Live poultry, other than chicken, over 185 grams . . .	523	1,172	5,661	4,446	3,861
Total poultry, live . . . . .	9,730	11,999	17,349	18,680	21,972
Chickens, whole . . . . .	114	112	1,096	2,328	3,464
Turkeys, whole . . . . .	77	66	37	26	16
Other poultry, whole . . . . .	1,575	1,818	1,936	2,178	1,933
Chickens, cuts and offal . . . . .	373	859	1,220	1,895	3,696
Turkey, cuts and offal . . . . .	1,753	1,032	1,918	860	712
Other poultry, cuts and offal . . . . .	324	378	620	1,050	1,309
Total poultry, fresh, chilled or frozen . . . . .	4,216	4,265	6,827	8,337	11,130
Goose liver . . . . .	1,466	1,162	1,318	921	983
Animal livers, other than goose live, prepared or preserved . . . . .	1,921	1,890	1,994	1,943	2,167
Turkey meals & meat (except liver), prepared or preserved . . . . .	2,102	1,350	925	1,350	1,549
Poultry, other than turkey, meals & meat (except livers) prepared or preserved . . . . .	4,117	1,886	2,363	3,551	4,865
Total poultry preserved . . . . .	9,606	6,288	6,600	7,765	9,564
Total poultry . . . . .	23,552	22,552	30,776	34,782	42,666
Share of total:			(Percent)		
Live . . . . .	41	53	56	54	51
Fresh, chilled or frozen . . . . .	18	19	22	24	0
Preserve & preserved . . . . .	41	28	21	22	22

Source: U.S. Department of Commerce.

**Table A-17**  
**Live poultry: U.S. imports of domestic merchandise, by principal markets, 1993-97**

	1993	1994	1995	1996	
	<i>Value (1,000 dollars)</i>				
Canada .....	9,647	11,574	17,348	18,546	21,948
France .....	42	399	2	101	22
Thailand .....	0	0	0	12	0
United Kingdom .....	3	26	0	4	0
Other .....	38	0	0	17	1
Total .....	9,730	11,999	17,350	18,680	21,971
	<i>Quantity (1,000 birds)</i>				
Canada .....	7,041	6,691	7,434	8,295	9,494
France .....	3	52	0	16	4
Thailand .....	0	0	0	2	0
United Kingdom .....	8	13	0	0	0
Other .....	12	0	0	0	0
Total .....	7,064	6,755	7,434	8,313	9,498
	<i>Unit value (dollars per bird)</i>				
Canada .....	1.37	1.73	2.33	2.24	2.31
France .....	14.00	7.67	0.00	6.31	5.50
Thailand .....	0.00	0.00	0.00	6.00	0.00
United Kingdom .....	0.38	2.00	0.00	0.00	0.00
Other .....	3.17	0.00	0.00	0.00	0.00
Average .....	1.38	1.78	2.33	2.25	2.31

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table A-18**  
**Poultry meat: U.S. imports of domestic merchandise, by principal markets, 1993-97**

	1993	1994	1995	1996	1997
	<i>Value (1,000 dollars)</i>				
Canada .....	8,292	7,001	9,921	12,690	17,228
Israel .....	2,402	1,239	617	1,387	1,541
France .....	2,219	1,742	1,852	1,336	1,180
Hong Kong .....	590	165	538	518	430
Other .....	319	407	498	171	316
Total .....	13,822	10,554	13,426	16,102	20,695
	<i>Quantity (1,000 pounds)</i>				
Canada .....	7,449	6,501	10,315	9,956	13,042
Israel .....	893	481	225	529	648
France .....	225	165	163	141	104
Hong Kong .....	271	75	245	251	121
Other .....	176	181	240	99	430
Total .....	9,015	7,403	11,188	10,977	14,345
	<i>Unit value (cents per pound)</i>				
Canada .....	111.3	107.7	96.2	127.5	132.1
Israel .....	269.0	257.8	274.4	262.1	237.8
France .....	986.8	1,053.6	1,135.2	946.9	1,138.8
Hong Kong .....	217.6	220.1	219.9	206.1	354.6
Other .....	180.9	225.1	207.2	172.4	73.5
Average .....	153.3	142.6	120.0	146.7	144.3

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table A-19**

**Poultry: Harmonized Tariff Schedule subheadings; description; U.S. col 1. rate of duty as of Jan. 1, 1998; U.S. exports, 1997; and U.S. imports, 1997**

HTS subheadin	Suf-fix	Brief description	Col. 1 rate of duty as of Jan. 1, 1998		Export	Imports 1997
			General	Special <sup>1</sup>		
<i>(1,000 dollars)</i>						
0105.11.00	10	Chickens, live, breeding stock, whether or not purebred, weighing not over 185 g each, layer-type (egg-type) . . . . .	1.3¢/each	Free (A+,CA,E,IL,J,MX)	15,201	1,278
0105.11.00	20	Chickens, live, breeding stock, whether or not purebred, weighing not over 185 g each, broiler-type (meat-type) . . . . .	1.3¢/each	Free (A+,CA,E,IL,J,MX)	83,954	820
0105.11.00	40	Chickens, live, except breeding stock, weighing not over 185 g each . . .	1.3¢/each	Free (A+,CA,E,IL,J,MX)	2,831	2,198
0105.12.00		Turkeys, live, weighing not over 185 g each . . . . .	1.3¢/each	Free (A+,CA,E,IL,J,MX)	5,798	12,911
0105.19.00		Ducks, geese and guineas, live, weighing not over 185 g each . . . . .	1.3¢/each	Free (A+,CA,E,IL,J,MX)	1,369	505
0105.92.00		Chickens, live, weighing not more than 2000 g each . . . . .	2.8¢/kg	Free (A+,CA,E,IL,J,MX)	7,635	334
0105.93.00		Chickens, live, weighing over 2000 g each . . . . .	2.8¢/kg	Free (A+,CA,E,IL,J,MX)	239	65
0105.99.00		Turkeys, ducks, geese and guinea fowls, live, weighing over 185 g each	2.8¢/kg	Free (A+,CA,E,IL,J,MX)	1,228	3,861
0207.11.00	20	Chickens, young (broilers, fryers, roasters and capons) not cut in pieces, fresh or chilled . . . . .	9.5¢/kg	Free (A+,CA,E,IL,J,MX)	7,575	2,804
0207.11.00	40	Chickens, nesoi, not cut in pieces, fresh or chilled . . . . .	9.5¢/kg	Free (A+,CA,E,IL,J,MX)	114,043	101
0207.12.00	20	Chickens, young (broilers, fryers, roasters and capons) not cut in pieces, frozen . . . . .	9.5¢/kg	Free (A+,CA,E,IL,J,MX)	20,412	0
0207.12.00	40	Chickens, nesoi, not cut in pieces, frozen . . . . .	9.5¢/kg	Free (A+,CA,E,IL,J,MX)	50,394	559
0207.13.00		Chicken cuts and edible offal, fresh or chilled . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	126,400	2,420
0207.14.00	20	Chicken livers, frozen . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	( <sup>2</sup> )	19
0207.14.00	40	Chicken cuts and edible offal (except livers) frozen . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	( <sup>2</sup> )	1,257
0207.24.00	00	Turkeys, not cut in pieces, fresh or chilled . . . . .	16.2¢/kg	Free (A+,CA,E,IL,J,MX)	7,058	2
0207.25.20	00	Turkeys, not cut in pieces, valued less than 88¢/kg, frozen . . . . .	9.5¢/kg	Free (A+,CA,E,IL,J,MX)	( <sup>3</sup> )	0
0207.25.40	00	Turkeys, not cut in pieces, valued 88¢ or more per kg, frozen . . . . .	10.8%	Free (A+,CA,E,IL,J,MX)	( <sup>3</sup> )	14
0207.26.00	00	Turkey cuts and edible offal, fresh or chilled . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	34,865	268

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See footnotes at end of table

Table A-19—Continued

Poultry: Harmonized Tariff Schedule subheadings; description; U.S. col 1. rate of duty as of Jan. 1, 1998; U.S. exports, 1997; and U.S. imports, 1997

HTS subheadin	Suf-fix	Brief description	Col. 1 rate of duty as of Jan. 1, 1998		Export 1997	Imports 1997
			General	Special <sup>1</sup>		
(1,000 dollars)						
0207.27.00	20	Turkey livers, frozen . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	1,207	0
0207.27.00	40	Turkey cuts and edible offal (except livers), frozen . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	( <sup>4</sup> )	444
0207.32.00	00	Ducks, geese and guineas, not cut in pieces, fresh or chilled . . . . .	9.5¢/kg	Free (A+,CA,E,IL,J,MX)	708	358
0207.33.00	00	Ducks, geese and guineas, not cut in pieces, frozen . . . . .	9.5¢/kg	Free (A,CA,E,IL,J,MX)	5,371	1,575
0207.34.00	00	Livers, fatty, of geese or ducks, edible, fresh or chilled . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	425	433
0207.35.00	00	Ducks, geese or guineas cuts and edible offal, nesoi, fresh or chilled . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	194	238
0207.36.00	20	Poultry livers, frozen . . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	( <sup>5</sup> )	115
0207.36.00	40	Duck, geese or guinea cuts and edible offals (except livers), frozen . . . .	19.1¢/kg	Free (A+,CA,E,IL,J,MX)	( <sup>5</sup> )	523
1602.20.20	00	Goose liver, prepared or preserved . . . . .	5.8¢/kg	Free (A+,CA,E,IL,J,MX)	( <sup>6</sup> )	983
1602.20.40	00	Animal livers except goose, prepared or preserved . . . . .	3.8%	Free (A,CA,E*,IL,J,MX)	( <sup>6</sup> )	2,167
1602.31.00	20	Prepared meals of turkey . . . . .	7.6%	Free (A,CA,E,IL,J,MX)	8,425	505
1602.31.00	40	Turkey meat and meat offal (except liver) prepared or preserved nesoi . .	7.6%	Free (A,CA,E,IL,J,MX)	( <sup>7</sup> )	1,044
1602.32.00	10	Prepared meals of the chicken of heading 0105 except turkeys, in airtight containers . . . . .	7.6%	Free (A,CA,E,IL,J,MX)	27,015	483
1602.32.00	30	Prepared meals of chickens of heading 0105, nesoi . . . . .	7.6%	Free (A,CA,E,IL,J,MX)	3,881	637
1602.32.00	40	Prepared or preserved of chickens of heading 0105, excluding prepared meals, nesoi . . . . .	7.6%	Free (A,CA,E,IL,J,MX)	( <sup>8</sup> )	1,622
1602.39.00	15	Prepared meals of the poultry of heading 0105 except turkeys and chickens, in airtight containers . . . . .	7.6%	Free (A,CA,E,IL,J,MX)	( <sup>9</sup> )	200
1602.39.00	35	Prepared meals of the poultry of heading 0105 except turkeys and chickens, nesoi . . . . .	7.6%	Free (A,CA,E,IL,J,MX)	( <sup>9</sup> )	845
1602.39.00	45	Meat and meat offal (except liver) of the poultry of heading 0105, nesoi, prepared or preserved . . . . .	7.6%	Free (A,CA,E,IL,J,MX)	14,176	1,078

See footnotes at end of table

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**Table A-19—Continued**

<sup>1</sup> Programs under which special tariff treatment may be provided and the corresponding symbols for such programs as they are indicated in the “Special” subcolumn are as follows: North American Free Trade Agreement: Goods of Canada (CA); North American Free Trade Agreement, Goods of Mexico (MX); Caribbean Basin Economic Recovery Act (E) or (E\*); United States-Israel Free Trade Act (I); Andean Trade Preference Act (J); General System of Preferences (A or A+). For more information on these programs, see appendix B.

<sup>2</sup> Imports under HTS subheadings 0207140020 and 0207140040 correspond to exports under Schedule B subheadings 0207140010, 0207140025, 0207140030, 0207140045, 0207140050, and 0207140090. The total value of exports under Schedule B subheadings 0207140010, 0207140025, 0207140030, 0207140045, 0207140050, and 0207140090 was \$ 1,574,291 in 1997.

<sup>3</sup> Imports under HTS subheadings 02072520 and 02072540 correspond to exports under Schedule B subheadings 0207250000. The total value of exports under Schedule B subheading 0207250000 was \$ 18,473 in 1997.

<sup>4</sup> Imports under HTS subheading 0207270040 correspond to exports under Schedule B subheadings 0207270010, 0207270025, 0207270030, 0207270045, and 0207270090. The total value of exports under Schedule B subheadings 0207270010, 0207270025, 0207270030, 0207270045, and 0207270090 was \$ 227,715 in 1997.

<sup>5</sup> Imports under HTS subheading 0207360020 and 0207360040 correspond to exports under Schedule B subheading 0207360000. The value of U.S. exports under schedule B subheading 0207360000 was \$ 3,270 in 1997.

<sup>6</sup> Imports under HTS subheading 1602202000 and 1602204000 correspond to exports under Schedule B subheading 1602200000. The value of U.S. exports under schedule B subheading 1602200000 was \$ 1,030 in 1997.

<sup>7</sup> Imports under HTS subheading 1602310040 correspond to exports under Schedule B subheadings 1602310030, 1602310050, and 1602310090. The value of exports under Schedule B subheadings 1602310030, 1602310050, and 1602310090 was \$ 26,396 in 1997.

<sup>8</sup> Imports under HTS subheading 1602320040 correspond to exports under Schedule B subheadings 1602320050 and 1602320090. The total value of exports under Schedule B subheadings 1602320050 and 1602320090 was \$ 118,621 in 1997.

<sup>9</sup> Imports under HTS subheadings 1602390035 and 1602390045 correspond to exports under Schedule B subheading 1602390025. The total value of U.S. exports under Schedule B subheading 1602390025 was \$ 4,691 in 1997.

Source: U.S. Department of Commerce.

**Table A-20**

**U.S. poultry imports: Ad valorem equivalent rates of duty based on customs value and dutiable value, average 1993 and 1997**

*(Percent)*

<b>Product</b>	<b>Duty based on customs</b>		<b>Duty based on dutiable</b>	
	<b>1993</b>	<b>1997</b>	<b>1993</b>	<b>1997</b>
Live poultry <sup>1</sup> . . . . .	0.8	0.2	0.8	0.2
Poultry meat & edible offal, fresh, chilled or frozen <sup>2</sup> .	5.7	0.7	6.3	0.8
Poultry meat & edible offal, prepared or preserved <sup>3</sup> .	3.1	1.2	4.5	1.6
All poultry . . . . .	2.6	0.5	3.0	0.6

<sup>1</sup> Poultry included in chapter 1 of Harmonized Tariff schedule (HTS).

<sup>2</sup> Poultry included in chapter 2 of HTS.

<sup>3</sup> Poultry included in chapter 16 of HTS.

Source: U.S. Department of Commerce.

**Table A-21**  
**Poultry: Composition of U.S. exports, 1993-97**

	<i>(1,000 dollars)</i>				
	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
Live chicken, not over 185 grams . . . . .	103,868	106,088	107,511	95,070	101,986
Live poultry, other than chicken, not over 185 grams	4,476	5,218	6,447	5,512	7,167
Live chicken, over 185 grams . . . . .	10,614	6,653	6,592	3,277	7,874
Live poultry, other than chicken, over 185 grams . .	1,796	1,587	1,748	1,386	1,228
Total poultry, live . . . . .	120,754	119,546	122,298	105,245	118,255
Chickens, whole . . . . .	55,675	68,497	78,089	143,389	192,424
Turkeys, whole . . . . .	14,413	18,875	16,888	21,792	25,531
Other poultry, whole . . . . .	5,609	4,894	5,401	5,980	6,079
Chickens, cuts and offal . . . . .	742,231	1,177,646	1,599,610	1,940,690	1,700,691
Turkey, cuts and offal . . . . .	129,909	147,889	136,218	190,025	263,787
Other poultry, cuts and offal . . . . .	11,538	9,834	13,744	3,442	3,889
Total poultry, fresh, chilled or frozen . . . . .	959,375	1,427,635	1,849,950	2,305,318	2,192,401
Animal livers, prepared or preserved . . . . .	8,020	770	659	723	1,030
Turkey meals & meat (except liver), prepared or preserved . . . . .	29,204	30,684	46,626	42,761	34,821
Poultry, other than turkey, meals & meat (except livers) prepared or preserved . . . . .	112,035	112,096	129,135	134,759	168,384
Total poultry, prepared or preserved . . . . .	149,259	143,550	176,420	178,243	204,235
Total poultry . . . . .	1,229,388	1,690,731	2,148,668	2,588,806	2,514,891
Share of total:	<i>(Percent)</i>				
Live . . . . .	10	7	6	4	5
Fresh, chilled or frozen . . . . .	78	84	86	89	87
Preserve & preserved . . . . .	12	8	8	7	8

Source: U.S. Department of Commerce.

**Table A-22**  
**Live poultry: U.S. exports of domestic merchandise, by principal markets, 1993-97**

	1993	1994	1995	1996	1997
	<i>Value (million dollars)</i>				
Canada .....	30.6	29.0	26.7	24.0	28.8
Brazil .....	8.9	9.9	11.0	9.8	11.3
China .....	7.8	7.8	9.4	6.4	6.5
Indonesia .....	4.0	4.7	5.9	5.1	5.6
Mexico .....	8.4	7.7	6.6	5.1	5.3
Japan .....	4.2	3.4	3.5	3.6	4.4
Philippines .....	3.5	3.6	5.1	4.9	4.0
Thailand .....	3.8	4.2	4.4	3.4	4.2
Dominican Republic .....	2.9	2.7	2.3	3.2	3.3
Netherlands .....	4.2	4.6	4.3	2.8	3.3
Other .....	42.6	41.8	43.2	37.1	41.5
Total .....	120.8	119.5	122.3	105.2	118.3
	<i>Quantity (1,000 birds)</i>				
Canada .....	24,250	30,004	22,154	22,203	27,402
Brazil .....	2,687	2,348	2,746	2,333	2,973
China .....	3,964	2,107	3,306	1,128	1,757
Indonesia .....	789	810	992	678	747
Mexico .....	8,732	10,694	9,254	5,111	4,488
Japan .....	2,359	2,145	2,313	1,607	3,082
Philippines .....	760	806	1,386	832	591
Thailand .....	527	535	801	599	865
Dominican Republic .....	1,603	1,471	1,320	2,461	1,482
Netherlands .....	403	765	637	465	550
Other .....	16,134	16,128	15,934	12,359	12,841
Total .....	62,208	67,813	60,843	49,776	56,778
	<i>Unit value (dollars per bird)</i>				
Canada .....	1.26	0.97	1.21	1.08	1.05
Brazil .....	3.30	4.24	3.99	4.19	3.79
China .....	1.97	3.71	2.83	5.67	3.72
Indonesia .....	5.03	5.84	5.90	7.46	7.51
Mexico .....	0.96	0.72	0.71	1.00	1.19
Japan .....	1.80	1.59	1.52	2.23	1.42
Philippines .....	4.56	4.44	3.69	5.91	6.83
Thailand .....	7.20	7.88	5.43	5.62	4.83
Dominican Republic .....	1.81	1.87	1.74	1.28	2.25
Netherlands .....	10.32	5.96	6.77	6.00	5.97
Other .....	2.64	2.59	2.71	3.00	3.23
Average .....	1.94	1.76	2.01	2.11	2.08

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table A-23**  
**Poultry meat: U.S. exports of domestic merchandise, by principal markets, 1993-97**

	1993	1994	1995	1996	1997
	<i>Value (million dollars)</i>				
Russia .....	83.5	309.9	606.6	912.6	780.5
Hong Kong .....	169.5	274.0	402.6	419.5	430.2
Mexico .....	205.2	229.0	164.3	208.1	225.8
Canada .....	164.7	162.8	169.1	169.1	201.6
Japan .....	142.3	172.9	171.5	171.5	133.5
Lativa .....	4.2	0.4	1.3	72.9	93.4
Poland .....	35.0	50.5	47.2	56.3	54.1
China .....	17.6	23.6	33.9	60.3	52.5
South Africa .....	1.2	11.4	29.1	25.4	44.2
Singapore .....	29.0	39.9	38.2	38.1	29.3
Other .....	256.6	296.8	362.6	349.8	351.4
Total .....	1,108.6	1,571.2	2,026.4	2,483.6	2,396.6
	<i>Quantity (million pounds)</i>				
Russia .....	247.8	844.1	1,613.8	2,065.8	2162.0
Hong Kong .....	498.8	756.2	1,034.5	1,115.2	1174.2
Mexico .....	377.4	417.2	345.7	396.5	453.8
Canada .....	144.9	133.5	135.0	150.0	177.1
Japan .....	265.8	289.3	282.1	285.2	236.4
Lativa .....	12.9	0.8	2.9	155.7	247.2
Poland .....	130.6	139.9	124.8	143.1	152.0
China .....	60.9	75.5	94.3	176.3	153.9
South Africa .....	2.1	30.2	62.0	60.5	119.7
Singapore .....	61.3	71.4	58.6	58.4	49.4
Other .....	569.2	592.2	745.5	658.4	729.2
Total .....	2,371.6	3,350.4	4,499.3	5,265.1	5,654.7
	<i>Unit value (cents per pound)</i>				
Russia .....	33.7	36.7	37.6	44.2	36.1
Hong Kong .....	34.0	36.2	38.9	37.6	36.6
Mexico .....	54.4	54.9	47.5	52.5	49.8
Canada .....	113.7	122.0	125.2	112.7	113.9
Japan .....	53.5	59.8	60.8	60.1	56.5
Lativa .....	32.4	47.5	46.0	46.8	37.8
Poland .....	26.8	36.1	37.8	39.3	35.6
China .....	28.9	31.2	36.0	34.2	34.1
South Africa .....	55.2	37.9	46.9	42.0	37.0
Singapore .....	47.3	55.8	65.2	65.2	59.3
Other .....	45.1	50.1	48.6	53.1	48.2
Average .....	46.7	46.9	45.0	47.2	42.4

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table A-24**  
**Poultry: World production, by selected countries and country groups, 1993-97**  
*(1,000 metric tons)*

<b>Countries and groups</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
<b>North America</b>					
Canada .....	766	854	861	893	914
Mexico .....	1,422	1,483	1,554	1,600	1,680
United States .....	12,396	13,206	13,786	14,522	15,021
Subtotal .....	14,584	15,543	16,201	17,015	17,615
<b>South America</b>					
Argentina .....	630	675	700	680	710
Brazil .....	3,211	3,491	4,140	4,144	4,441
Colombia .....	497	514	537	623	654
Guatemala .....	85	95	104	111	117
Honduras .....	35	40	41	42	53
Venezuela .....	350	365	410	391	395
Subtotal .....	4,808	5,180	5,932	5,991	6,370
<b>European Union</b>					
Belgium-Luxembourg .....	196	219	251	264	259
Denmark .....	162	172	168	170	175
France .....	1,875	1,961	2,083	2,206	2,307
Germany .....	599	626	633	638	717
Greece .....	173	175	178	176	176
Ireland .....	88	97	101	108	110
Italy .....	1,061	1,084	1,123	1,151	1,170
Netherlands .....	565	594	641	700	713
Portugal .....	238	248	235	251	260
Spain .....	840	880	910	950	955
United Kingdom .....	1,294	1,358	1,394	1,443	1,477
Subtotal .....	7,091	7,414	7,717	8,057	8,319
<b>Eastern Europe</b>					
Hungary .....	307	320	368	365	370
Poland .....	300	345	367	410	435
Romania .....	160	135	160	180	160
Subtotal .....	767	800	895	955	965
<b>Former Soviet Union</b>					
Russia .....	1,277	1,068	859	720	705
Ukraine .....	362	265	235	230	180
Subtotal .....	1,639	1,333	1,094	950	885

**Table A-24—Continued**

**Poultry: World production, by selected countries and country groups, 1993-97**

(1,000 metric tons)

<b>Countries and groups</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
<b>Middle East</b>					
Israel .....	224	242	249	262	267
Kuwait .....	18	18	20	22	24
Saudi Arabia .....	285	286	309	340	438
Turkey .....	350	330	390	480	535
United Arab Emirates .....	16	18	20	21	22
Subtotal .....	893	894	988	1,125	1,286
<b>Africa</b>					
Egypt .....	295	345	360	380	385
Republic of South Africa .....	641	667	736	804	887
Subtotal .....	936	1,012	1,096	1,184	1,272
<b>Asia</b>					
China .....	5,736	7,550	9,347	10,746	12,500
Hong Kong .....	90	84	94	90	88
India .....	454	507	578	590	595
Japan .....	1,368	1,258	1,282	1,249	1,235
Republic of Korea .....	369	378	415	459	473
Singapore .....	62	57	60	59	58
Taiwan .....	585	604	630	668	694
Thailand .....	685	740	825	890	975
Subtotal .....	9,349	11,178	13,231	14,751	16,618
<b>Oceania</b>					
Australia .....	467	498	500	503	512
Subtotal .....	467	498	500	503	512
<b>Total</b> .....	<b>40,534</b>	<b>43,852</b>	<b>47,654</b>	<b>50,531</b>	<b>53,842</b>

Source: USDA, FAS post reports, official statistics, and inter-agency analysis.

**Table A-25**  
**Poultry: World consumption, by selected countries and country groups, 1993-97**

(1,000 metric tons)

Countries and groups	1993	1994	1995	1996	1997
North America					
Canada .....	840	903	902	922	973
Mexico .....	1,582	1,673	1,717	1,789	1,890
United States .....	11,384	11,683	11,766	12,139	12,488
Subtotal .....	13,806	14,259	14,385	14,850	15,351
South America					
Argentina .....	679	732	715	698	728
Brazil .....	2,782	3,000	3,705	3,562	3,771
Guatemala .....	95	100	111	119	126
Venezuela .....	330	364	406	378	388
Subtotal .....	3,886	4,196	4,937	4,757	5,013
European Union					
Belgium-Luxembourg .....	164	178	182	195	196
Denmark .....	70	74	80	82	84
France .....	1,213	1,291	1,292	1,448	1,432
Germany .....	1,004	1,044	1,105	1,156	1,225
Greece .....	180	185	192	193	191
Ireland .....	79	80	82	94	95
Italy .....	1,065	1,063	1,069	1,093	1,108
Netherlands .....	292	307	316	332	336
Portugal .....	231	198	233	254	250
Spain .....	917	959	968	1,015	1,024
United Kingdom .....	1,377	1,450	1,474	1,527	1,564
Subtotal .....	6,592	6,829	6,993	7,389	7,505
Eastern Europe					
Hungary .....	221	240	245	256	263
Poland .....	362	392	380	431	456
Romania .....	205	179	185	186	175
Subtotal .....	788	811	810	873	894
Former Soviet Union					
Russia .....	1,486	1,588	1,749	1,755	1,899
Ukraine .....	375	271	244	235	240
Subtotal .....	1,861	1,859	1,993	1,990	2,139

**Table A-25—Continued**

**Poultry: World consumption, by selected countries and country groups, 1993-97**

(1,000 metric tons)

<b>Countries and groups</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
<b>Middle East</b>					
Israel .....	224	230	235	242	246
Saudi Arabia .....	553	558	582	603	645
Turkey .....	350	320	383	469	525
United Arab Emirates .....	70	70	70	71	72
Subtotal .....	1,197	1,178	1,270	1,385	1,488
<b>Africa</b>					
Egypt .....	297	350	364	382	389
Republic of South Africa .....	659	728	829	869	951
Subtotal .....	956	1,078	1,193	1,251	1,340
<b>Asia</b>					
China .....	5,800	7,642	9,582	11,196	12,950
Hong Kong .....	281	293	300	321	339
India .....	454	507	578	590	595
Japan .....	1,750	1,725	1,798	1,796	1,790
Republic of Korea .....	389	398	452	511	534
Singapore .....	106	113	112	115	116
Taiwan .....	580	600	627	669	697
Thailand .....	522	564	638	706	778
Subtotal .....	9,882	11,842	14,087	15,904	17,799
<b>Oceania</b>					
Australia .....	460	489	490	493	501
Subtotal .....	460	489	490	493	501
<b>Total .....</b>	<b>39,428</b>	<b>42,541</b>	<b>46,158</b>	<b>48,892</b>	<b>52,030</b>

Source: USDA, FAS post reports, official statistics, and inter-agency analysis.

**Table A-26**  
**Poultry: World exports, by selected countries and country groups, 1993-97**

(1,000 metric tons)

<b>Countries and groups</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
<b>North America</b>					
Canada .....	16	36	67	75	74
United States .....	1,028	1,472	1,969	2,324	2,519
Subtotal .....	1,044	1,508	2,036	2,399	2,593
<b>South America</b>					
Argentina .....	0	0	8	10	20
Brazil .....	429	495	435	582	670
Venezuela .....	15	10	3	8	7
Subtotal .....	444	505	446	600	697
<b>European Union 1/</b>					
Belgium-Luxembourg .....	0	0	0	0	0
Denmark .....	0	0	0	0	0
France .....	0	0	0	0	0
Germany .....	0	0	0	0	0
Greece .....	0	0	0	0	0
Ireland .....	0	0	0	0	0
Italy .....	0	0	0	0	0
Netherlands .....	0	0	0	0	0
Portugal .....	0	0	0	0	0
Spain .....	0	0	0	0	0
United Kingdom .....	0	0	0	0	0
Subtotal .....	0	0	0	0	0
<b>Eastern Europe</b>					
Hungary .....	87	80	108	109	112
Poland .....	15	14	17	21	25
Romania .....	3	3	1	1	1
Subtotal .....	105	97	126	131	138
<b>Former Soviet Union</b>					
Russia .....	2	6	5	18	12
Ukraine .....	0	2	3	6	6
Subtotal .....	2	8	8	24	18

**Table A-26—Continued**

**Poultry: World exports, by selected countries and country groups, 1993-97**

(1,000 metric tons)

Countries and groups	1993	1994	1995	1996	1997
Middle East					
Israel .....	18	12	13	15	17
Saudi Arabia .....	5	8	17	25	35
Turkey .....	1	12	5	6	10
Subtotal .....	24	32	35	46	62
Africa					
Republic of South Africa .....	8	4	1	4	6
Subtotal .....	8	4	1	4	6
Asia					
China .....	176	252	390	450	550
Hong Kong .....	205	322	489	568	658
Japan .....	6	3	3	3	3
Singapore .....	10	11	7	9	10
Taiwan .....	5	5	5	5	5
Thailand .....	163	176	177	169	187
Subtotal .....	565	769	1,071	1,204	1,413
Oceania					
Australia .....	7	9	10	10	11
Subtotal .....	7	9	10	10	11
Total .....	2,199	2,932	3,733	4,418	4,938

Source: USDA, FAS post reports, official statistics, and inter-agency analysis.

1/ Trade data not reported for European Union.

**Table A-27**  
**Poultry: World imports, by selected countries and country groups, 1993-97**

(1,000 metric tons)

Countries and groups	1993	1994	1995	1996	1997
North America					
Canada .....	86	91	105	115	129
Mexico .....	160	190	163	189	210
United States .....	0	0	0	2	2
Subtotal .....	246	281	268	306	341
South America					
Argentina .....	48	52	20	30	39
Subtotal .....	48	52	20	30	39
European Union 1/					
Belgium-Luxembourg .....	0	0	0	0	0
Denmark .....	0	0	0	0	0
France .....	0	0	0	0	0
Germany .....	0	0	0	0	0
Greece .....	0	0	0	0	0
Ireland .....	0	0	0	0	0
Italy .....	0	0	0	0	0
Netherlands .....	0	0	0	0	0
Portugal .....	0	0	0	0	0
Spain .....	0	0	0	0	0
United Kingdom .....	0	0	0	0	0
Subtotal .....	0	0	0	0	0
Eastern Europe					
Poland .....	72	61	34	44	50
Romania .....	50	49	26	7	12
Subtotal .....	122	110	60	51	62
Former Soviet Union					
Russia .....	193	501	870	1,053	1,206
Ukraine .....	3	2	9	90	90
Subtotal .....	196	503	879	1,143	1,296
Middle East					
Saudi Arabia .....	263	275	290	288	247
United Arab Emirates .....	54	63	100	105	90
Subtotal .....	317	338	390	393	337

**Table A-27—Continued**  
**Poultry: World imports, by selected countries and country groups, 1993-97**

(1,000 metric tons)

Countries and groups	1993	1994	1995	1996	1997
Africa					
Egypt .....	2	5	4	2	4
Republic of South Africa .....	26	65	94	69	70
Subtotal .....	28	70	98	71	74
Asia					
China .....	240	344	625	900	950
Hong Kong .....	396	533	695	799	909
Japan .....	402	455	549	559	560
Republic of Korea .....	20	24	36	57	58
Singapore .....	58	70	61	70	66
Thailand .....	0	0	0	0	0
Subtotal .....	1,116	1,426	1,966	2,385	2,543
Total .....	2,073	2,780	3,681	4,379	4,692

Source: USDA, FAS post reports, official statistics, and inter-agency analysis.

1/ Trade data not reported for European Union.

**Table A-28****World poultry meat trade: Major world poultry exporting countries and export destination; major world importing countries and import source, 1997**

<b>Leading exporting country</b>	<b>Export destination<sup>1</sup></b>	<b>Leading importing country</b>	<b>Import source<sup>2</sup></b>
1. United States	1. Russia (38) 2. Hong Kong (21) 3. Mexico (8) 4. Latvia (4) 5. Japan (4)	1. Russia	1. United States (77) 2. France (6) 3. Netherlands (6) 4. Belgium (5) 5. Canada (1)
2. Brazil	1. Saudi Arabia (28) 2. Japan (14) 3. Hong Kong (11) 4. Argentina (7) 5. Russia (5)	2. China	1. United States (47) 2. Brazil (23) 3. Belgium (6) 4. Argentina (5) 5. Australia (4)
3. European Union	1. Russia (20) 2. Saudi Arabia (14) 3. Hong Kong (9) 4. UAE (8) 5. Yemen (4)	3. Hong Kong	1. United States (65) 2. Brazil (9) 3. United Kingdom (5) 4. China (4) 5. Netherlands (4)
4. Hong Kong	1. China (98) 2. Macau (2)	4. Japan	1. China (40) 2. United States (22) 3. Brazil (20) 4. Thailand (17)
5. China	1. Hong Kong (14) 2. Japan (14) 3. Korea (4) 4. Singapore (2) 5. UAE (1)	5. Saudi Arabia	1. Brazil (50) 2. France (42) 3. United States (6) 4. Denmark (1)

<sup>1</sup> Percent of exporting country exports shipped to destination in parenthesis (based on quantity of trade).

<sup>2</sup> Percent of importing country imports received from source in parenthesis (based on quantity of trade).

Source: USDA, FAS, Agricultural attache reports for Brazil, European Union, Hong Kong, China, Russia, Japan, and Saudi Arabia, 1997. U.S. data compiled from table A-23.

**Table A-29****Top 10 world poultry producing countries: Quantity of poultry production and exports, 1997; annual growth in poultry production and exports, 1993-97**

Country	Production 1997	Exports 1997	Production annual growth 1993-97	Exports annual growth 1993-97
	---- (1,000 metric tons) ----		----- (Percent) -----	
United States .....	15,021	2,519	4.9	25.8
China .....	12,500	550	21.7	33.9
European Union .....	8,319	861	4.1	( <sup>1</sup> )
Brazil .....	4,441	670	8.6	13.0
Mexico .....	1,680	( <sup>2</sup> )	4.3	( <sup>2</sup> )
Japan .....	1,235	( <sup>2</sup> )	-2.5	( <sup>2</sup> )
Thailand .....	975	187	9.2	3.7
Canada .....	914	( <sup>2</sup> )	4.6	( <sup>2</sup> )
South Africa .....	887	( <sup>2</sup> )	8.5	( <sup>2</sup> )
Russia .....	705	( <sup>2</sup> )	-13.6	( <sup>2</sup> )

<sup>1</sup> Not available<sup>2</sup> Exports less than 100,000 metric tons in 1997.

Source: Compiled from tables A-24 and A-27, EU exports from Eurostat.

**APPENDIX B**  
**TARIFF AND TRADE AGREEMENT**  
**TERMS**

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In the *Harmonized Tariff Schedule of the United States* (HTS), chapters 1 through 97 cover all goods in trade and incorporate in the tariff nomenclature the internationally adopted Harmonized Commodity Description and Coding System through the 6-digit level of product description. Subordinate 8-digit product subdivisions, either enacted by Congress or proclaimed by the President, allow more narrowly applicable duty rates; 10-digit administrative statistical reporting numbers provide data of national interest. Chapters 98 and 99 contain special U.S. classifications and temporary rate provisions, respectively. The HTS replaced the *Tariff Schedules of the United States* (TSUS), effective January 1, 1989.

Duty rates in the *general* subcolumn of HTS column 1 are most-favored-nation (MFN) rates, many of which have been eliminated or are being reduced as concessions resulting from the Uruguay Round of Multilateral Trade Negotiations. Column 1-general duty rates apply to all countries except those enumerated in HTS general note 3(b) (Afghanistan, Cuba, Laos, North Korea, and Vietnam), which are subject to the statutory rates set forth in *column 2*. Specified goods from designated MFN-eligible countries may be eligible for reduced rates of duty or for duty-free entry under one or more preferential tariff programs. Such tariff treatment is set forth in the *special* subcolumn of HTS rate-of-duty column 1 or in the general notes. If eligibility for special tariff rates is not claimed or established, goods are dutiable at column 1-general rates. The HTS does not enumerate those countries to which a total or partial embargo has been declared.

The *Generalized System of Preferences* (GSP) affords nonreciprocal tariff preferences to developing countries to aid their economic development and to diversify and expand their production and exports. The U.S. GSP, enacted in title V of the Trade Act of 1974 for 10 years and extended several times thereafter, applies to merchandise imported on, or after, January 1, 1976, and before the close of June 30, 1998. Indicated by the symbol "A," "A\*," or "A+" in the special subcolumn, the GSP provides duty-free entry to eligible articles that are the product of, and imported directly from, designated beneficiary developing countries, as set forth in general note 4 to the HTS.

The *Caribbean Basin Economic Recovery Act* (CBERA) affords nonreciprocal tariff preferences to developing countries in the Caribbean Basin area to aid their economic development and to diversify and expand their production and exports. The CBERA, enacted in title II of Public Law 98-67, implemented by Presidential Proclamation 5133 of November 30, 1983, and amended by the Customs and Trade Act of 1990, applies to merchandise entered, or withdrawn from warehouse for consumption, on, or after, January 1, 1984. Indicated by the symbol "E" or "E\*" in the special subcolumn, the CBERA provides duty-free entry to eligible articles (and reduced-duty treatment to certain other articles), which are the product of, and imported directly from, designated countries, as set forth in general note 7 to the HTS.

Free rates of duty in the special subcolumn followed by the symbol "IL" are applicable to products of Israel under the *United States-Israel Free Trade Area Implementation Act* of 1985 (IFTA), as provided in general note 8 to the HTS.

Preferential nonreciprocal duty-free or reduced-duty treatment in the special subcolumn followed by the symbol "J" or "J\*" is afforded to eligible articles that are the product of designated beneficiary countries under the *Andean Trade Preference Act* (ATPA), enacted as title II of Public Law 102-182 and implemented by Presidential Proclamation 6455 of July 2, 1992 (effective July 22, 1992), as set forth in general note 11 to the HTS.

Preferential or free rates of duty in the special subcolumn followed by the symbol "CA" are applicable to eligible goods of Canada, and rates followed by the symbol "MX" are applicable to eligible goods of Mexico, under the *North American Free Trade Agreement*, as provided in general note 12 to the HTS and implemented effective January 1, 1994, by Presidential Proclamation 6641 of December 15, 1993. Goods must originate in the NAFTA region under rules set forth in general note 12(t) and meet other requirements of the note and applicable regulations.

Other special tariff treatment applies to particular *products of insular possessions* (general note 3(a)(iv)), *products of the West Bank and Gaza Strip* (general note 3(a)(v)), goods covered by the *Automotive Products Trade Act* (APTA) (general note 5) and the *Agreement on Trade in Civil Aircraft* (ATCA) (general note 6), *articles imported from freely associated states* (general note 10), *pharmaceutical products* (general note 13), and *intermediate chemicals for dyes* (general note 14).

The *General Agreement on Tariffs and Trade 1994* (GATT 1994), pursuant to the Agreement Establishing the World Trade Organization, is based upon the earlier GATT 1947 (61 Stat. (pt. 5) A58; 8 UST (pt. 2) 1786) as the primary multilateral system of disciplines and principles governing international trade. Signatories' obligations under both the 1994 and 1947 agreements focus upon most-favored-nation treatment, the maintenance of scheduled concession rates of duty, and national treatment for imported products; the GATT also provides the legal framework for customs valuation standards, "escape clause" (emergency) actions, antidumping and countervailing duties, dispute settlement, and other measures. The results of the Uruguay Round of multilateral tariff negotiations are set forth by way of separate schedules of concessions for each participating contracting party, with the U.S. schedule designated as Schedule XX.

Pursuant to the *Agreement on Textiles and Clothing* (ATC) of the GATT 1994, member countries are phasing out restrictions on imports under the prior "Arrangement Regarding International Trade in Textiles" (known as the *Multifiber Arrangement* (MFA)). Under the MFA, which was a departure from GATT 1947 provisions, importing and exporting countries negotiated bilateral agreements limiting textile and apparel shipments, and importing countries could take unilateral action in the absence or violation of an agreement. Quantitative limits had been established on imported textiles and apparel of cotton, other vegetable fibers, wool, man-made fibers, or silk blends in an effort to prevent or limit market disruption in the importing countries. The ATC establishes notification and safeguard procedures, along with other rules concerning the customs treatment of textile and apparel shipments, and calls for the eventual complete integration of this sector into the GATT 1994 over a ten-year period, or by Jan. 1, 2005.