

# Industry & Trade Summary

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Poultry

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June 1992

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U.S. International Trade Commission  
Washington, DC 20436

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---

*This report was prepared principally by*

Douglas E. Newman  
and  
Elizabeth N. Lee

Animal and Forest Products Branch  
Agriculture, Fisheries, and Forest Products Division

**Address all communications to**  
**Kenneth R. Mason, Secretary to the Commission**  
**United States International Trade Commission**  
**Washington, DC 20436**

## PREFACE

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 area 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 1986 through 1990 and represents one of approximately 250-300 individual reports to be produced in this series during the first half of the 1990s. Listed below are the individual summary reports published to date on the agricultural, animal, and vegetable products sector.

| <i>USITC<br/>publication<br/>number</i> | <i>Publication<br/>date</i> | <i>Title</i>                                  |
|---|-----------------------------|---|
| 2459 (AG-1)                             | November 1991 .....         | Live Sheep and Meat of Sheep                  |
| 2462 (AG-2)                             | November 1991 .....         | Cigarettes                                    |
| 2477 (AG-3)                             | January 1992 .....          | Dairy Produce                                 |
| 2478 (AG-4)                             | January 1992 .....          | Oil Seeds                                     |
| 2511 (AG-5)                             | March 1992 .....            | Live Swine and Fresh, Chilled, or Frozen Pork |
| 2520 (AG-6)                             | June 1992 .....             | Poultry                                       |

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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.



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## INTRODUCTION

This summary profiles the U.S. and major foreign poultry industries, provides information on tariff and nontariff measures in domestic and foreign markets for poultry, and analyzes the performance of the U.S. poultry industry in domestic and foreign markets. In addition, this summary provides data on domestic and foreign poultry production and trade. The period reviewed is 1986-90.

The poultry industry comprises 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 \$13 billion in 1990: broiler production totaled approximately \$10 billion; turkey production, about \$3 billion; and other poultry production, approximately \$300 million.<sup>1</sup> U.S. exports of poultry totaled a record \$774 million in 1990; this sum represented about 6 percent of production. U.S. imports of poultry amounted to \$28 million in 1990. Imports typically account for a small share of consumption, usually less than 0.5 percent annually. U.S. poultry consumption totaled \$12.6 billion in 1990. Per capita poultry consumption, which has increased substantially in recent years, reached a record 41.1 kilograms in 1990.

The production process for poultry involves several distinct stages (figure 1). The process begins with the hatching of baby chicks, which are either added to the breeding stock or grown for egg or meat production. The next stage involves the growing of the chicks either to sexual maturity for breeding, to egg-producing age, or to slaughter weight. The final stage is the production of poultry meat products. By far, the major variable production cost is feed (mainly corn and soybeans). Other major variable cost items include labor and packaging. Capital (depreciation, rent) is, by far, the major fixed cost item in poultry production—the poultry production process is highly mechanized.

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 consumer demand for convenience.

<sup>1</sup> These data represent the production of the end product (i.e., meat) and reflect the value of intermediate stages of production.

| Type                                  | 1982   | 1987   | Decline<br>Percent |
|---------------------------------------|--------|--------|--------------------|
| Laying hens and pullets               | 36,110 | 21,665 | 40                 |
| Broilers and other meat-type chickens | 30,100 | 27,645 | 8                  |
| Turkeys                               | 7,498  | 7,347  | 2                  |
| Ducks, geese, and other poultry       | 10,551 | 8,567  | 19                 |
| Total or average, poultry             | 84,259 | 65,224 | 23                 |

## U.S. INDUSTRY PROFILE

The U.S. poultry industry is the largest and most advanced in the world. The United States accounted for approximately 30 percent of total world production of poultry meat in 1990, more than three times the share of the next leading country (the Soviet Union).<sup>2</sup> The U.S. industry pioneered many of the basic production methods currently in use throughout the world. 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. The industry has experienced an impressive, long-term growth that accelerated during the past decade. This growth has been fueled by the world's fourth-largest population and an increasing demand for poultry both in domestic and export markets.

### Industry Structure

The U.S. poultry industry is covered under the following Standard Industrial Code (SIC) industry numbers:

| SIC<br>number | Description   |
|---------------|---|
| 0251          | Broiler, Fryer, and Roaster Chickens                    |
| 0252          | Chicken Eggs <sup>3</sup>                               |
| 0253          | Turkeys and Turkey Eggs                                 |
| 0254          | Poultry Hatcheries                                      |
| 0259          | Poultry and Eggs, Not Elsewhere<br>Classified           |
| 2015          | Poultry Slaughtering and Processing                     |
| 5144          | Poultry and Poultry Products<br>(wholesale trade)       |
| 5149          | Farm-Product Raw Materials, Not<br>Elsewhere Classified |

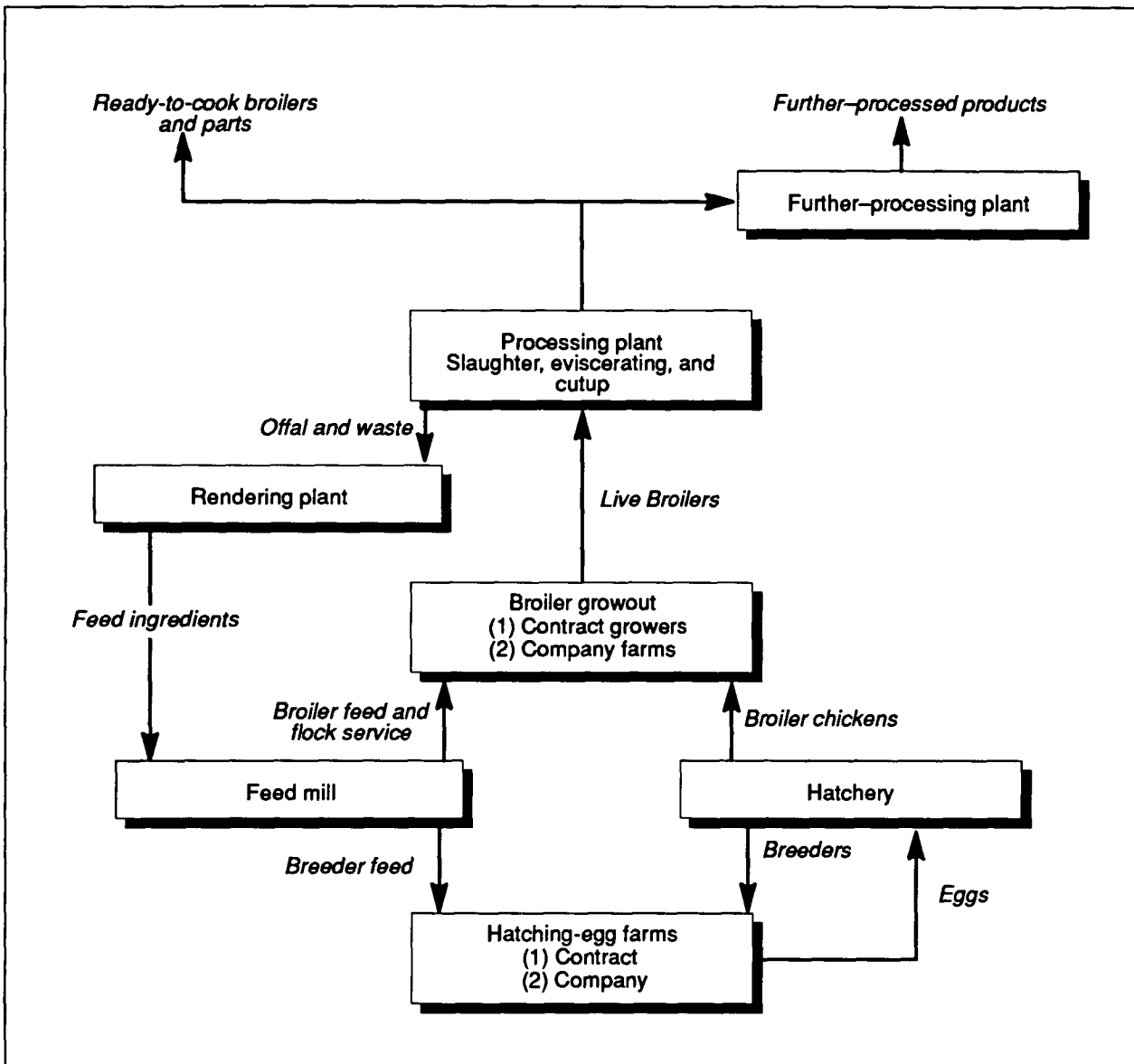
Figure 2 provides a diagram of the general structure of the U.S. poultry industry.

### Number of Firms and Production Facilities

Poultry production basically 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 1982 and 1987 are shown in the following tabulation (data from the 1987 Census of Agriculture):

<sup>2</sup> U.S. Foreign Agricultural Service, *World Poultry Situation*, Circular Series FL&P 1-91 (Washington: FAS, Apr. 1991). This comparison is based on broilers and turkeys. A substantial quantity of ducks and geese are known to be produced in China.  
<sup>3</sup> This industry group includes the sale of spent laying hens.

**Figure 1**  
**Functions of a typical integrated broiler firm**



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

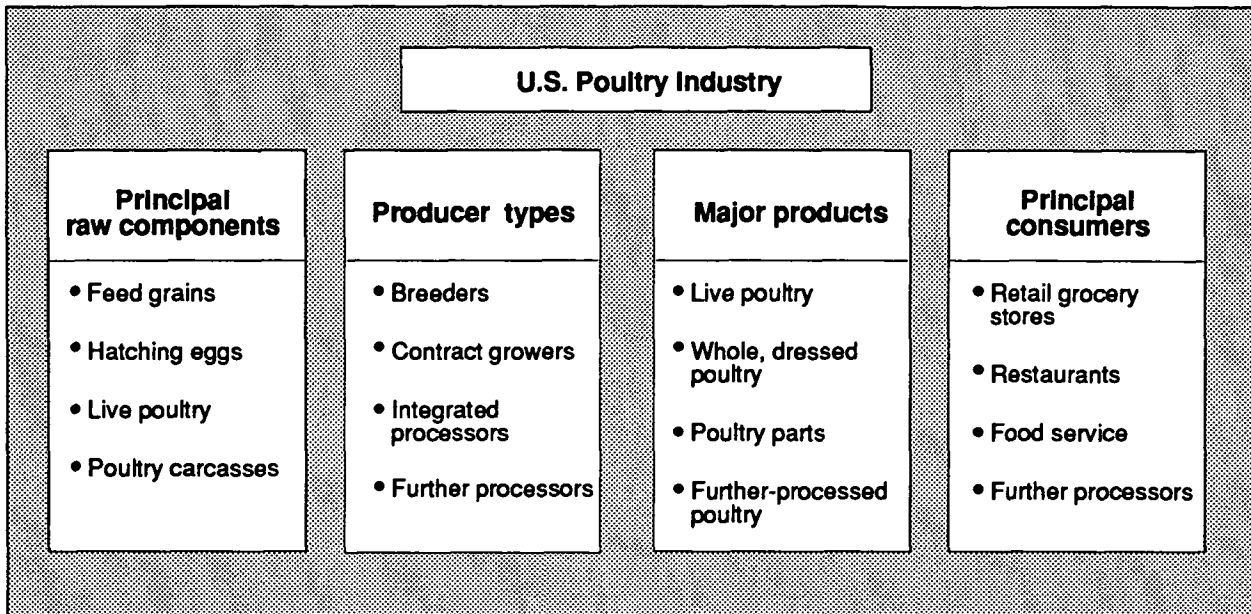
The total number of poultry farms decreased by 23 percent during 1982-87. The largest decline, 40 percent, occurred in the number of farms with sales of egg-type chickens (laying hens and pullets). This drop was precipitated mainly by declining demand for eggs (not a subject of this summary) in the U.S. market. The relatively 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 selling ducks, geese, and guineas, a relatively minor poultry category in the U.S. market, mirrored a decline in demand for the meat of these poultry.

The number of poultry processing firms totaled approximately 100 in 1990. These firms consist of approximately 54 integrated broiler processors, 32 turkey processors, and 14 processors of ducks, geese, and guineas. In addition, there are numerous processors that produce further-processed poultry items such as



**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.

breaded chicken products for fast-food chain restaurants.

The bulk of poultry processing occurs in plants that process poultry only. The number of Federally inspected plants that processed only poultry totaled 508 as of September 30, 1990 (table B-1). Of these plants, 164 were involved in slaughtering, 209 in processing, and 135 in both slaughtering and processing. The number of poultry plants declined during 1986-90, mainly as a result of rationalization of production facilities caused by mergers and acquisitions and a long-term trend toward larger plants. In addition to plants that processed only poultry, 3,180 plants processed both poultry and other meats (such as beef and pork) in 1990.

**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 B-2). In the broiler sector, concentration increased most among the top four firms, mainly as the result of merger and

acquisition activities. The major acquisition involved Tyson Foods, Inc., the leading U.S. broiler firm, which acquired Holly Farms Foods, Inc., the third-largest firm before the acquisition, in June 1989.<sup>4</sup> In 1990, the top 4 broiler firms accounted for 41 percent of production, the top 8 accounted for 57 percent, and the top 20 accounted for 79 percent. Concentration in the turkey sector was relatively stable during the period under review.

**Employment and Wages**

Data on employment and average hourly earnings in the poultry industry<sup>5</sup> during 1986-90 are given in the following tabulation (data from U.S. Department of Commerce, *U.S. Industrial Outlook*, various issues):

<sup>4</sup> Before the acquisition, Tyson Foods was the market share leader in processed poultry items and Holly Farms was the leader in fresh poultry. The acquisition enabled Tyson Foods to attain the lead in market share in the fresh sector.

<sup>5</sup> Employment data during 1987-90 include SIC group 2015. Data for 1986 include SIC groups 2016 and 2017. Employment data are somewhat overstated because the SIC groups include egg processing.

|                                      | 1986    | 1987    | 1988    | 1989    | 1990    |
|--------------------------------------|---------|---------|---------|---------|---------|
| Employment (number of workers) ..... | 130,000 | 148,000 | 156,000 | 166,000 | 173,000 |
| Average hourly earnings .....        | \$6.01  | \$6.16  | \$6.39  | \$6.70  | \$7.04  |

Employment in the poultry industry increased by one-third during the review period, as the rising demand for poultry led to increased production.

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). Wages increased by 17 percent during the period under review; however, such wages generally were the lowest in the U.S. food-processing sector.

### Geographic Distribution

The geographic distribution of the U.S. poultry industry varies by sector. The broiler sector is concentrated in the South Central<sup>6</sup> region, which accounted for 48 percent of total U.S. commercial production in 1990 (table B-3). The second-leading region that year was the South Atlantic<sup>7</sup> (40 percent). The concentration in these regions results from 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. The turkey sector is less concentrated regionally than the broiler sector; turkey production occurs mainly in the South Atlantic (31 percent of total U.S. production) and West North Central<sup>8</sup> (28 percent) regions. Regional concentration of turkey production is accounted for by the same factors as concentration of broiler production.

The leading poultry-producing States are shown in table B-4. Concentration of poultry production by State has remained steady during 1986-90. Turkey production is slightly more concentrated on the State level than is broiler production. Duck production is concentrated on Long Island and in the Midwest; goose production is concentrated in the Midwest.

### Labor Intensity

There has been a long-term trend toward decreasing labor intensity and increasing capital intensity in the U.S. poultry industry. The following tabulation shows the number of labor hours required to produce 100 pounds of meat for various time periods (data from Floyd Lasley, *The U.S. Poultry Industry: Changing Economics and Structure*, USDA, July 1983):

| Type    | 1945-49 | 1955-59 | 1965-69 | 1976-80 |
|---------|---------|---------|---------|---------|
| Broiler | 5.1     | 1.3     | 0.5     | 0.1     |
| Turkey  | 13.1    | 4.4     | 1.3     | .4      |

<sup>6</sup> Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

<sup>7</sup> Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.

<sup>8</sup> North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, and Missouri.

Increased production efficiency was realized through the use of automated equipment, larger production units, and advanced management techniques.

### Productivity

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 a pound of meat; and the amount of time required to raise poultry to slaughter weight. The hatchability ratio for chickens has remained above 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 (pounds of feed per pound of meat) for an efficient broiler operation and about 3:1 for turkeys. This ratio was about 4:1 for broilers in 1940. In comparison, this ratio currently 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 currently.

The level of automation in the poultry industry 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 grow-out operations are generally computerized and environmentally controlled, and poultry processing plants use automated assembly-line processing and packaging lines.

Although poultry-processing plants employ relatively low-wage production-line labor, poultry production also involves highly skilled scientific and technical staff for the research and development associated with selective breeding, hatching, and optimal feed and growing conditions. Poultry processors employ highly skilled engineers to develop and maintain highly efficient processing operations and managers to compete in an increasingly competitive global market.

### Integration

Vertical integration has been a key factor in the postwar growth of the U.S. poultry industry. Vertical integration offers many advantages to poultry firms, including flexible control of costs, quality, and production levels. In addition, vertical integration may reduce overall risk, since an individual firm has greater control over production; this risk reduction consequently facilitates the ability of the firm to obtain financing. Factors that contribute to the vertically integrated structure of the U.S. poultry industry are its relatively short production cycle (involving fast turnover and high production volumes that lead to economies of size) and the linkages between specialized, discrete stages (hatching, growout, slaughter, further processing, and marketing). Vertical integration is realized either through contracts (mainly backward integration in the growout stage) or ownership (both backward integration in the feed and

hatching chick stages and forward integration in the further processing and marketing stages).<sup>9</sup> Virtually all broiler production and more than 90 percent of turkey production is accounted for by vertically integrated operations.<sup>10</sup> Most broiler producers contract with growout operators to raise company-owned broilers (92 percent in 1988); a larger share of turkey production is totally accounted for by owner-integrated operations (28 percent in 1977) compared with broiler production (8 percent in 1988).<sup>11</sup>

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.

### Foreign Participation

The level of direct foreign investment<sup>12</sup> in the U.S. poultry industry is believed to be low. An exception is the breeder sector of the industry, which consists of several foreign-owned, multinational companies. However, this sector is small compared with the total output of the industry.

Direct foreign investment by U.S. poultry firms has increased in certain foreign markets in recent years. For example, Texas-based Pilgrim's Pride Corporation, the fifth-largest U.S. broiler firm, operates three processing plants in Mexico, with production targeted for that market. Tyson Foods, Inc., the largest U.S. broiler firm, has joint-venture operations in Mexico and Canada that supply product to those domestic markets and to Asia<sup>13</sup> and a marketing venture in Japan that distributes U.S. and domestic product.

### Profitability

Data on profitability in the U.S. poultry industry are given in table B-5. The broiler industry experienced fluctuating but positive net returns each year during 1986-90. The turkey industry experienced generally declining net returns during the period under review, with losses occurring each year during 1987-89. The level of and trend in net returns largely follow feed costs, which are the greatest production cost component in poultry production.

<sup>9</sup> In traditional economic terms, vertical integration generally does not apply to contractual relationships. However, in the poultry industry, contractual linkages generally are pervasive and longstanding and can be considered as a form of vertical integration.

<sup>10</sup> Floyd A. Lasley, William L. Henson, and Harold B. Jones, Jr., *The U.S. Turkey Industry*, USDA, Economic Research Service, Agricultural Economic Report No. 525, Mar. 1985, p. 27; Floyd A. Lasley and others, *The U.S. Broiler Industry*, USDA, ERS, Agricultural Economic Report No. 591, Nov. 1988, p. 17.

<sup>11</sup> *Ibid.*

<sup>12</sup> Although several U.S. poultry firms are capitalized in the U.S. stock market, the level of foreign portfolio investment in the firms is indeterminable.

<sup>13</sup> Tyson Foods, Inc., *Annual Report*, 1990, p. 6.

### Marketing Methods

The principal marketing channels in the poultry industry are shown in figure 3. Most poultry is sold through distributors, who then sell mainly to retail outlets (principally grocery stores) and public eating places. Poultry processors also directly market a substantial portion of their output to retail outlets. In addition, poultry processors distribute their output to pet food producers and renderers, institutional foodservice operators, and other processors (who further process products for sale to retail outlets and restaurants, mostly fast-food outlets).

Marketing channels and methods have changed substantially over the years, particularly during the past decade. Table B-6 shows the share of broiler production that is marketed through various distribution channels for selected years.<sup>14</sup> A much greater share of broiler production currently is marketed through restaurants, particularly fast-food outlets, than in the past. The growing popularity of poultry because of consumer health considerations has caused fast-food firms to add chicken products to their menus. In addition, there has been a trend toward increased further processing, as consumer demand for convenience has increased and as intense competition in the broiler market has induced the development of new products.

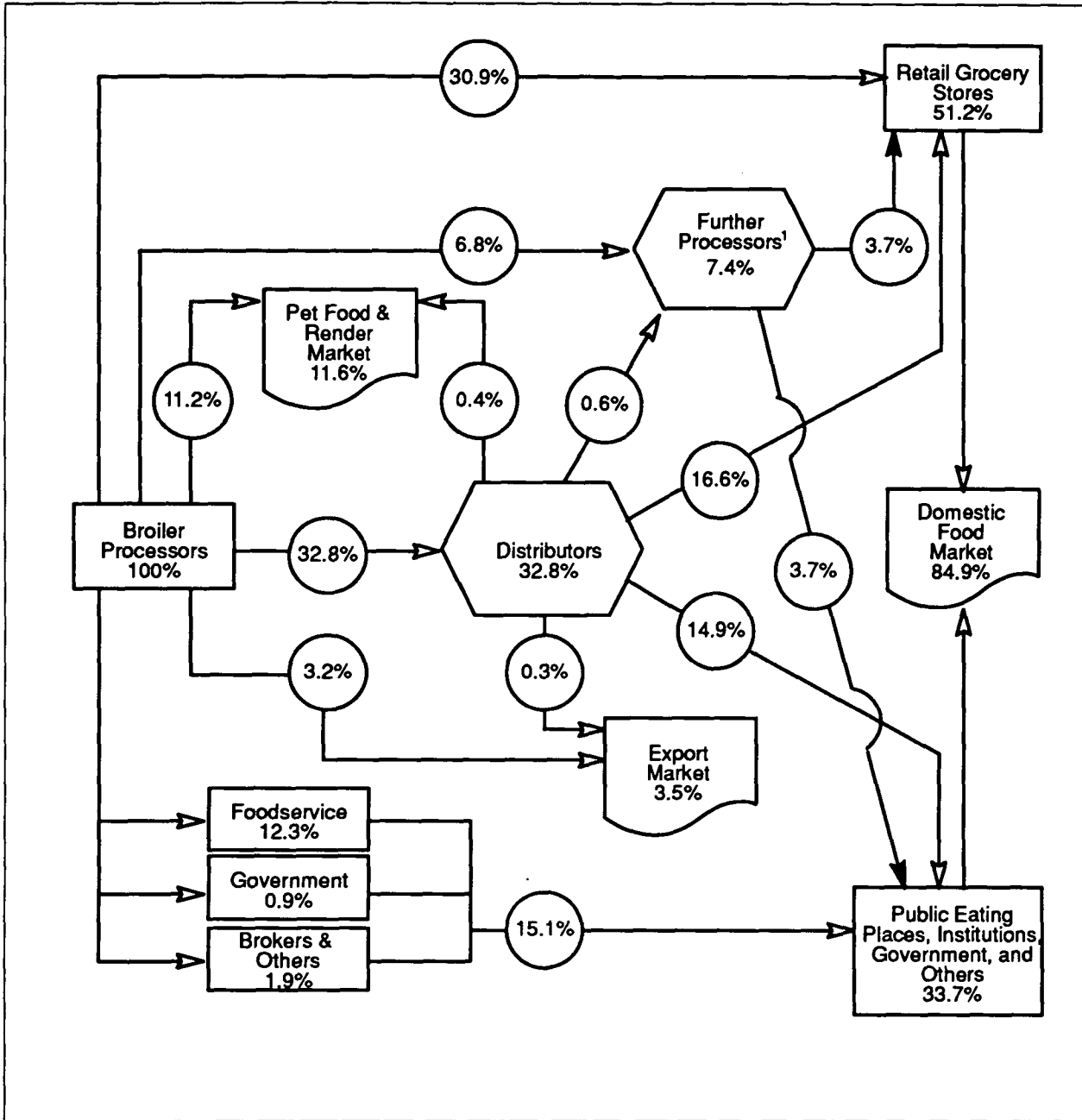
### Prices

Live poultry prices reflect prices of day-old chicks or poults. Such prices usually are specified for a period of time in a continuing agreement or as spot prices quoted by hatcheries. 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 quotes. 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. Retail outlets will, from time to time, feature poultry items as a "loss leader" in order to attract customers to their establishments.

Prices for live poultry and poultry meat items during 1989-90 are given in table B-7. In general, prices for live poultry were relatively constant during the period. Price trends for poultry meat varied by product, with prices for parts generally rising more rapidly than prices for whole birds.

<sup>14</sup> The data were developed through a survey by the National Broiler Council, the primary broiler industry trade association. Respondents accounted for 96 percent of broiler production in 1989.

**Figure 3**  
**Major broiler marketing channels and product flow, 1989**



<sup>1</sup> Marketing data are not available for this segment. Further processors were estimated by NBC to market 50 percent to retail and foodservice each.  
 Source: National Broiler Council, *Broiler Industry Marketing Practices, Calendar Year 1989*, Washington, DC, p. vi.

**U.S. Government Programs**

U.S. poultry production is subject to mandatory inspection by the Food Safety and Inspection Service (FSIS) of the U.S. Department of Agriculture if such production enters interstate or foreign commerce.<sup>15</sup>

The FSIS administers poultry inspection under the Poultry Products Inspection Act, as amended<sup>16</sup> to ensure that poultry products for use as human food are safe, wholesome, and accurately labeled. The USDA is in the process of implementing a new poultry inspection system called the Hazard Analysis and

<sup>15</sup> Such commerce accounts for the great bulk of U.S. poultry shipments.

<sup>16</sup> 21 U.S.C. 451 et seq.

Critical Control Point (HACCP) System. 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. The National Broiler Council, a poultry industry group, is participating in the HACCP implementation process by conducting tests of improved poultry-processing practices, such as during the carcass scalding, carcass washing, and automatic chlorination procedures. These tests may result in uniform industry standards and regulations under the HACCP.

A current regulatory issue that will affect the U.S. poultry industry is a recently announced proposal by the USDA and the Food and Drug Administration to revise and standardize food labeling regulations.<sup>17</sup> The proposal provides for mandatory labeling of nutrition information; definitions for descriptive terms such as "light," "lean," and "fresh"; and conditions for health claims concerning calcium and osteoporosis, fat and cardiovascular disease, fat and cancer, and salt and hypertension. In addition, raw, single-ingredient poultry products would be subject to a voluntary labeling program. The proposed regulations, which are subject to public comment and Congressional overview, are due to be finalized by November 8, 1992, and become effective on May 8, 1993.

The U.S. poultry industry generally does not benefit directly from U.S. Government programs with regard to production assistance. Indirect programs that affected 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 land set-aside and acreage-reduction programs, deficiency payments to producers, and export-enhancement programs, affect feed prices and, therefore, poultry production costs. A recent USDA study estimated that the removal of such programs would cause U.S. poultry production to decline by about 100 million pounds, or about 0.4 percent of the quantity of 1990 production.<sup>18</sup> The decline would occur because supplies of corn would decrease, resulting in higher feed prices.

In contrast, U.S. poultry exports have received direct benefits provided by the U.S. Department of Agriculture under the Export Enhancement Program (EEP). The EEP program for poultry provides direct subsidies for exports of frozen poultry to approved markets. This program was initiated in May 1985 in response to competition in third-country markets from subsidized poultry exports from major foreign producers such as France and Brazil as well as in response to a high value of the U.S. dollar and relatively high U.S. interest rates at the time. Another objective of the EEP has been to apply pressure to the

<sup>17</sup> USDA, HHS Propose Food Labeling Rules, *USDA press release 1081-91*, Nov. 6, 1991.

<sup>18</sup> Stephen L. Haley, *Measuring the Effectiveness of the Export Enhancement Program for Poultry*, USDA, ERS, Washington, DC, Mar. 1990, p. 19.

EC and other major agricultural exporters to reduce agricultural subsidies during the Uruguay Round of the GATT.<sup>19</sup> According to the USDA, as of September 12, 1991, 196,400 metric tons of poultry were sold through the EEP since its inception.

## Consumer Characteristics and Factors Affecting Demand

Virtually all U.S. consumption of live poultry is accounted for by commercial poultry meat and egg producers. Much of this consumption is internal, as these producers generally have company-owned hatcheries. Except for breeder stock, virtually all live poultry is consumed (by processing plants or egg-laying complexes) near production sites (hatcheries).

Poultry meat consumption occurs at several levels, depending on the market channel and product form. Immediate consumers include—

- 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;
- wholesale distributors, who distribute finished poultry products mainly to retail grocery stores and public eating places and institutions;
- foodservice distributors, who distribute finished poultry products mainly to public eating places and institutions; and
- pet food processors and renderers, who use poultry byproducts.

The ultimate consumers are the domestic population, who consume poultry products either in the home or in restaurants and institutions.

The demand for poultry is affected by many factors. These factors can be generally categorized into market size and consumer preferences. The primary market size factors include the size of the population and disposable income; consumer preference factors include consumer tastes, product attributes, and prices. The growth in the U.S. market size is only partially responsible for the growth in poultry demand over the years; consumer preference factors, which led to growth in per capita consumption, are also important. Consumer health concerns regarding fat and cholesterol, convenience attributes of poultry products, and a long-term decline in poultry prices (both in real terms and relative to competing products), have also contributed to the long-term rise in poultry demand.

A recent concern has arisen in the U.S. market regarding the contamination of poultry by salmonella, campylobacter, and other bacteria; this concern may have adversely affected the demand for poultry. The

<sup>19</sup> *Ibid.*, p. 2.

U.S. poultry industry and the USDA are addressing this concern in the aforementioned study and review of poultry processing methods and the poultry inspection system under the HACCP. In contrast, the aforementioned proposed changes in food labeling regulations likely will reinforce the demand for poultry products with respect to consumers' health considerations.

## FOREIGN INDUSTRY PROFILE

The United States is the world's leading producer of poultry and in 1990 accounted for about 30 percent of total world poultry production (table B-9). This share remained relatively stable during the period under review. The United States is both the leading world producer and consumer of poultry and a major world poultry exporter, ranking second in 1990. However, a substantial share of the world poultry market is accounted for by foreign industries. Major foreign poultry producers include the EC, the Soviet Union, China, and Brazil. Profiles of the poultry industries in these areas are provided below.

### European Community

The EC is the world's second-leading poultry producer and is the leading poultry exporter. In 1990, EC poultry production totaled 6.2 million metric tons, or about 17 percent of the world total (table B-9). EC poultry exports totaled 1.1 million metric tons in 1990, or about 42 percent of the world total including intra-EC trade and 25 percent of the total excluding intra-EC trade. France is the leading EC poultry-producing member, followed by Spain and the United Kingdom. The EC poultry industry is comparable to that of the United States in structure and production technology and efficiency. For example, efficiency, as measured by the feed conversion rate, is comparable in the EC and the United States, at about 2 pounds of feed to 1 pound of meat. However, the EC industry generally faces significantly higher production costs, particularly labor and feed. In 1986, broiler production costs were about 35 cents per pound in France and 55 cents per pound in the United Kingdom, compared with about 30 cents per pound in the United States.<sup>20</sup>

The EC industry generally is more export oriented than the U.S. industry, both in terms of intra-EC trade and non-EC exports. Per capita poultry consumption in the EC is less than half the U.S. level, and EC exports account for a much greater share of production (18 percent including intra-EC, 9 percent excluding intra-EC) compared with the United States (5 percent). Exports are particularly salient in France, where they account for nearly a third of production, and the Netherlands, where more than two-thirds of production is exported.

<sup>20</sup> Robert V. Bishop and others, *The World Poultry Market—Government Intervention and Multilateral Policy Reform*, USDA, ERS, Washington, DC, Mar. 1990.

The French poultry industry, the largest in the EC, has become increasingly concentrated, both in terms of share of production and geographically. The major firms are vertically integrated, as in the United States, and have become concentrated in the Brittany region.

The EC poultry industry benefits from a variety of measures provided both by the EC and member-country governments. The EC measures, administered under the Common Agricultural Policy, generally involve trade and include the maintenance of relatively high tariffs, minimum (sluiceway) market prices, variable import levies, and export refunds. Member-country government measures, which address both trade and production, vary greatly and include such items as export subsidies, import-licensing requirements, health and sanitary regulation, and tax benefits.

### Brazil

Brazil is another major, export-oriented poultry producer. Brazil is the world's fifth-leading poultry producer, with its production of 2.4 million metric tons accounting for about 7 percent of the world total in 1990 (table B-9). In terms of exports, Brazil is third in the world and accounted for 11 percent of total world poultry exports including intra-EC trade in 1990 and 14 percent excluding such trade. Although it is relatively new, the Brazilian poultry industry generally employs modern poultry production methods, mainly as a result of Government-funded industry development and growth policies. Efficiency in the industry (feed conversion ratio of 2.4:1) is somewhat lower than in the U.S. industry (2.0:1), and production costs are higher (32 cents per pound in Brazil in 1986 compared with 30 cents per pound in the United States). The Brazilian poultry industry is vertically integrated and highly concentrated, with the top five firms accounting for three-quarters of production in 1986.<sup>21</sup>

The Brazilian poultry industry is subject to Government policies that have both positive and negative effects. On the positive side, the industry benefits from input subsidies, low interest loans, and export tax credits. At the same time, the Brazilian industry is subject to relatively high domestic and export taxes.

Brazilian poultry exporters have encountered increasing competition in export markets in recent years. This competition has increased for two main reasons. First, a general shift in world poultry import market demand away from Brazil's traditional markets in the Middle East (Iraq, Egypt, Saudi Arabia) to Asian markets (mainly Hong Kong and Japan) benefited competing exporters such as the United States and the EC. Second, a general escalation in export subsidies among the major world poultry exporters eroded Brazil's export market share.

<sup>21</sup> *Ibid.*, p. 17.

## Soviet Union

The Soviet Union is the world's third-largest poultry producer and market and is the second-leading importer (excluding intra-EC trade). The Soviet poultry industry has not grown as fast as the expanding domestic market, and imports have filled the excess demand. Soviet poultry production totaled 3.4 million metric tons in 1990, or 9 percent of the world total (table B-9). The Soviet poultry market has been largely controlled since 1965 by the Soviet State Poultry Industry Trust (Ptitseprom). Ptitseprom coordinated the vertical integration of the industry and accounts for the majority of Soviet poultry production and marketing.

Most Soviet poultry production occurs in the state farm sector. However, the Soviet Government has encouraged private production of poultry since the mid-1980s. As of 1985, 65 percent of Soviet poultry production was accounted for by the state farm sector, with the remaining share accounted for by collective farms and individuals. The private sector will likely predominate in the future as a result of potential political and economic reforms. However, the current economic and political situation in the Soviet Union regarding market reforms lends great uncertainty for the short-term future of the Soviet poultry industry. Indeed, current economic difficulties have led to substantial Soviet imports of poultry, mainly from the United States.

Because the Soviet Union has been a nonmarket economy, cost comparisons with Western producers are not possible. However, production efficiency is lower in the Soviet Union, mainly because the Soviet poultry industry generally utilizes feedgrain with a lower protein content. The Soviet feed conversion ratio is about 3, and the broiler growout time is about 40 percent longer than in the United States, indicating that the Soviet poultry industry is relatively inefficient compared with Western industry.

## China

China is the world's fourth-largest poultry producer and consumer, accounting for 8 percent of total world production in 1990 (table B-9). Chinese poultry meat production totaled 3.2 million metric tons in 1990. About 80 percent of this total was accounted for by chicken meat, with most of the remainder accounted for by duck meat.<sup>22</sup> The Chinese poultry industry traditionally has been domestically oriented and relatively unsophisticated compared with Western industries. Most Chinese poultry production has been accounted for by household operations that utilize relatively primitive technology and market live birds in urban areas. However, the Chinese poultry industry is expanding rapidly, aided by relatively low production costs (especially feed and labor), increasing imports of quality breeding stock, and the entry of specialized

<sup>22</sup> USDA, FAS, *China 1990 Annual Poultry Report*, Report #CH1054, U.S. Embassy, Beijing, July 18, 1991, p. 2.

poultry farmers into the market. Several large-scale broiler operations (some with a capacity of 10 million broilers) have developed near large, urban areas. Foreign investment in the Chinese broiler sector is increasing, mainly from other Asian countries such as Thailand and Singapore.

The Chinese poultry industry has developed export markets, mainly in Japan, Hong Kong, and Singapore. However, Japanese rejection of shipments because of drug residues has been a recent problem. China is a low-cost producer of further-processed poultry, such as parts, mainly because its labor costs are lower than those of competing producers.

## U.S. TRADE MEASURES

### Tariff Measures

The provisions of the Harmonized Tariff Schedules of the United States (HTS) for the live poultry and poultry meat covered in this summary are shown in table B-10. 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, 1991. In addition, the table shows U.S. exports and imports of live poultry and poultry meat, by HTS item, during 1990. The aggregated trade-weighted average rate of duty for all products included in this summary averaged 4.7 percent in 1990. Appendix A includes an explanation of tariff and trade agreement terms.

### Nontariff Measures

U.S. imports of live poultry and poultry meat are subject to animal and plant health and sanitary regulations administered by the USDA under the Poultry Products Inspection Act, as amended.<sup>23</sup> These regulations generally state 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. The USDA also maintains a list of countries considered to be free of exotic Newcastle disease. U.S. imports of live poultry and poultry meat generally are restricted to these countries.<sup>24</sup> Such imports from other countries may be entered only in accordance with certain requirements, which generally impose prohibitive costs. The general effect of these nontariff measures has been to limit most imports of live poultry and poultry meat to Canada; imports from other sources generally are processed poultry products not subject to these measures. U.S. imports of poultry meat are insignificant compared with domestic production and consumption.

<sup>23</sup> Public Law 85-172, approved Aug. 28, 1957, as amended; 21 U.S.C. 451 et seq.

<sup>24</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 must be quarantined for 30 days. Countries approved to export poultry meat to the United States, as of March 1991, were Canada, France, Hong Kong, Israel, and the United Kingdom (England and Wales).

# 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 (duty free in most cases), whereas such rates for poultry meat are relatively high. The rates of duty applicable to imports of relevant principal poultry items into 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.

Canadian imports of live poultry breeding stock are free of duty. Canadian imports of other live poultry are subject to rates of duty ranging from 2 cents each to 12.5 percent ad valorem. Canadian imports of fresh, chilled, or frozen poultry meat are subject to a duty rate of 12.5 percent ad valorem, but not less than 11.02 cents (Canadian) per kilogram or more than 22.05 cents per 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 duty rates that range from free to 17.5 percent ad valorem.

Japanese imports of live poultry of all types are free of duty. Japanese imports of poultry meat range from free to 25 percent ad valorem.

Mexican duty rates on imports of poultry items have been substantially lowered in recent years. Imports of day-old chicks for breeding purposes are free of duty; duty rates on imports of other live poultry range between 10 and 20 percent ad valorem. Imports of fresh, chilled, or frozen poultry meat are duty free, and imports of further-processed poultry items are subject to a duty rate of 20 percent ad valorem.

The EC is not a major market for U.S. exports of poultry products, largely because of its restrictive tariff structure. The EC duty on imports of live poultry is 12 percent ad valorem, and duties on imports of poultry meat range between 5 and 26 percent ad valorem. Imports of most fresh, chilled, or frozen poultry items are subject to a duty of 18 percent ad valorem, and imports of most further-processed poultry items are dutiable at 21 percent ad valorem. Virtually all EC poultry imports are subject to additional levies in addition to the specified import duties under the Common Agricultural Policy. These levies generally are applied when import prices fall below a "sluiceway price," which is a minimum domestic price that is calculated based on feed costs.

Brazil, like the EC, maintains relatively high import duties on poultry items. Brazilian imports of live poultry are subject to duty rates that range between free (mainly for breeding stock) and 15 percent ad valorem. Imports of fresh, chilled, or frozen poultry meat are dutiable at 20 percent ad valorem, and imports of further processed poultry meat are dutiable at 40 percent ad valorem.

## Nontariff Measures

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 import quota for chicken, effective January 1, 1989, is 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 United States-Canada Free Trade Agreement (FTA). The global turkey import quota is 3.5 percent of the previous year's production level, up from 2 percent as a result of the FTA. The Canadian Government imposed quantitative restrictions on imports of live broiler chicks in May 1989. The quota level is based on a conversion factor of one chick being equivalent to 1.27 hatching eggs (for which quotas are also maintained); the quota level is set at 3.7 percent of Canadian production. The Canadian Government also allows for supplemental imports above the quota levels in the event that domestic production cannot satisfy demand. Although, in practice, quotas for supplemental imports are usually issued, the U.S. poultry industry has maintained that the quota system has substantially limited U.S. exports. One recent development regarding the restrictive nature of the Canadian import quotas involves a well-publicized complaint by a major U.S. chicken fast food company that operates in Canada. The firm has indicated that because of the quota and because Canadian domestic supply is insufficient to meet demand, particularly for the processed products marketed in the fast food outlets, its operations are affected by high prices and limited operating hours.<sup>25</sup>

Imports of poultry products into EC member countries are subject to various health and sanitary regulations and restrictions that apply to domestic poultry production in each country. These regulations and restrictions currently are being harmonized in conjunction with the EC market integration known as "EC 1992." In general, EC health and sanitary regulations regarding poultry imports are similar to those in the United States. However, the relatively high EC import tariffs generally pose a greater barrier to U.S. poultry exports than do nontariff measures.

## U.S. MARKET

The U.S. poultry market is the largest in the world. The U.S. market accounted for nearly 30 percent of world poultry consumption in 1990 (table B-8). U.S. per capita poultry consumption also led the world in 1990 at about 41.6 kilograms (table B-11). The U.S. poultry market is complex and dynamic, and it comprises many product forms and consumption patterns, which are discussed in the following sections.

<sup>25</sup> Anne Veigle, "Canada's Trade Laws Lay an Egg With U.S. Chicken Producers," *Washington Times*, Sept. 17, 1991.



## Consumption

The U.S. poultry market can be generally divided into two segments—one for live poultry and one for poultry meat. The market for live poultry consists of producers of poultry meat and eggs. 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. Total U.S. consumption of poultry during 1986-90 (figure 4 and tables B-12 to B-14), as estimated by the U.S. International Trade Commission, is shown in the following tabulation (live poultry in millions of head, poultry meat in thousands of metric tons):

| <i>Year</i> | <i>Live poultry</i> | <i>Poultry meat</i> |
|-------------|---------------------|---------------------|
| 1986 .....  | 5,648               | 7,902               |
| 1987 .....  | 6,042               | 8,641               |
| 1988 .....  | 6,198               | 8,989               |
| 1989 .....  | 6,594               | 9,570               |
| 1990 .....  | 6,998               | 10,193              |

U.S. consumption of live poultry rose by nearly a quarter during 1986-90. 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 (table B-13). 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 the export market.

U.S. consumption of poultry meat continued a long-term rise during 1986-90, during which time it increased in quantity by 29 percent (table B-14). As is the case with live poultry, the principal poultry meat item in the U.S. market is chicken, followed by turkey meat. The consumption of other poultry is relatively minor. The rise in U.S. poultry meat consumption resulted from a rising population and shifting consumer preferences in favor of poultry meat at the expense of competing protein sources (mainly red meat). The U.S. market has a general preference for white poultry meat cuts.

Per capita consumption of poultry meat has risen substantially over the long term. This rise, in large part, has been at the expense of red meat consumption. Per capita poultry consumption averaged 15.5 kilograms in 1960, compared with 60.5 kilograms for red meat (table B-15, figure 5). By 1990, per capita consumption of poultry had increased to 41.1 kilograms and per capita consumption of red meat had declined to 54.5 kilograms. During 1986-90 alone, per capita consumption of poultry meat increased by one-quarter, while per capita consumption of red meat decreased by 14 percent. Per capita consumption of chicken alone surpassed that of pork in 1988 and beef in 1990.

## Production

U.S. production of live poultry increased from 5.7 billion head in 1986 to 7.0 billion head in 1990, or by 24 percent (table B-16). Live chicken production accounted for 95 percent of total live poultry production and rose by 23 percent during the period under review. Meat-type chickens are the principal type of chicken produced. This type accounted for 94 percent of U.S. live chicken production during the period under review. U.S. production of live turkeys increased by 45 percent during 1986-90; 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 1986-90, from 8.2 billion kilograms, valued at \$10.8 billion, to 10.8 billion kilograms, valued at \$13.4 billion (table B-17). This represented an increase of nearly one-third in quantity and one-quarter in value. 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 30 percent in quantity during 1986-90. Production of turkey meat rose at an even greater rate of 45 percent during the period. Production of other poultry was relatively constant.

## Imports

Foreign poultry producers generally cannot compete with the relatively low-cost U.S. poultry industry in the domestic market. In addition, health and sanitary restrictions limit foreign sources and product forms of U.S. poultry imports. Therefore, imports typically account for less than one-half percent of the U.S. market for poultry annually.

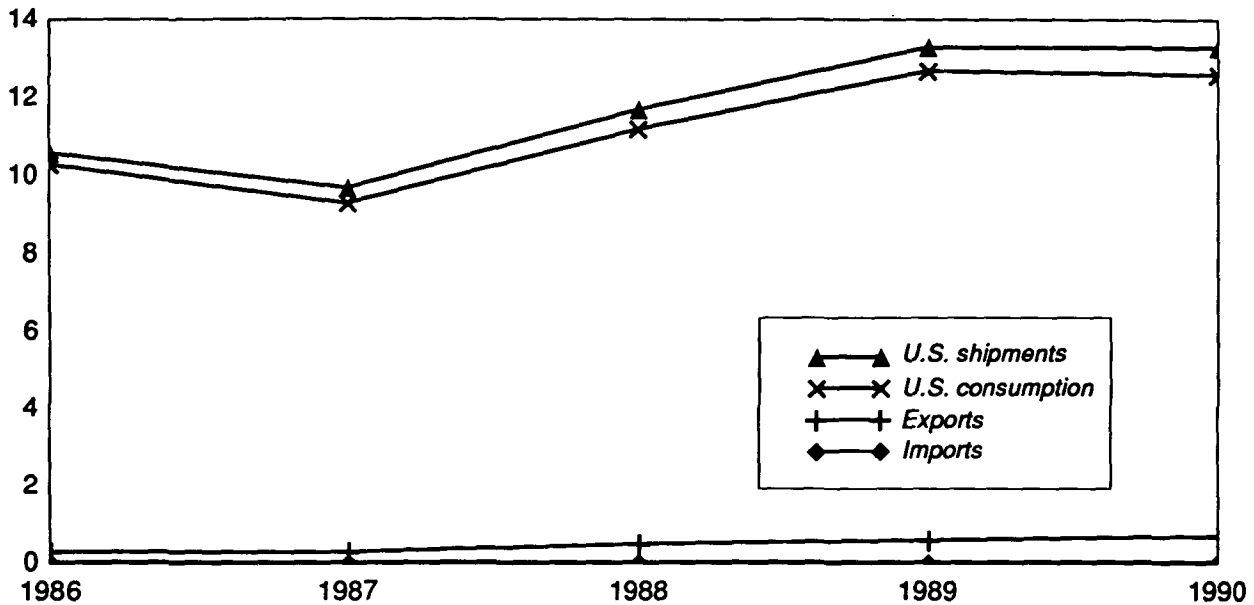
The bulk of U.S. live poultry imports consist of live baby chickens and turkey poult for breeder stock. Imports of poultry meat consist primarily of fresh, chilled, or frozen poultry, mainly spent laying hens from Canada destined to U.S. processing plants near the border. A smaller share of imports of poultry is accounted for by processed poultry specialty items, such as smoked turkey and poultry liver pates.

U.S. imports of live poultry showed no discernible trend during 1986-90 and ranged between 5.9 million head in 1986 and 7.2 million head in 1989. The value fluctuated independently of quantity during the period, from \$7.2 million in 1988 to \$9.6 million in 1987 (table B-18). Variations in domestic demand for breeder stock as well as fluctuating world prices (reflected by import unit values) contributed to the erratic nature of U.S. imports of live poultry.

U.S. imports of poultry meat decreased substantially during the period under review, from 13,300 metric tons, valued at \$24.3 million, in 1986 to

**Figure 4**  
**Poultry: U.S. consumption<sup>1</sup>, shipments, exports, and Imports, 1986-90**

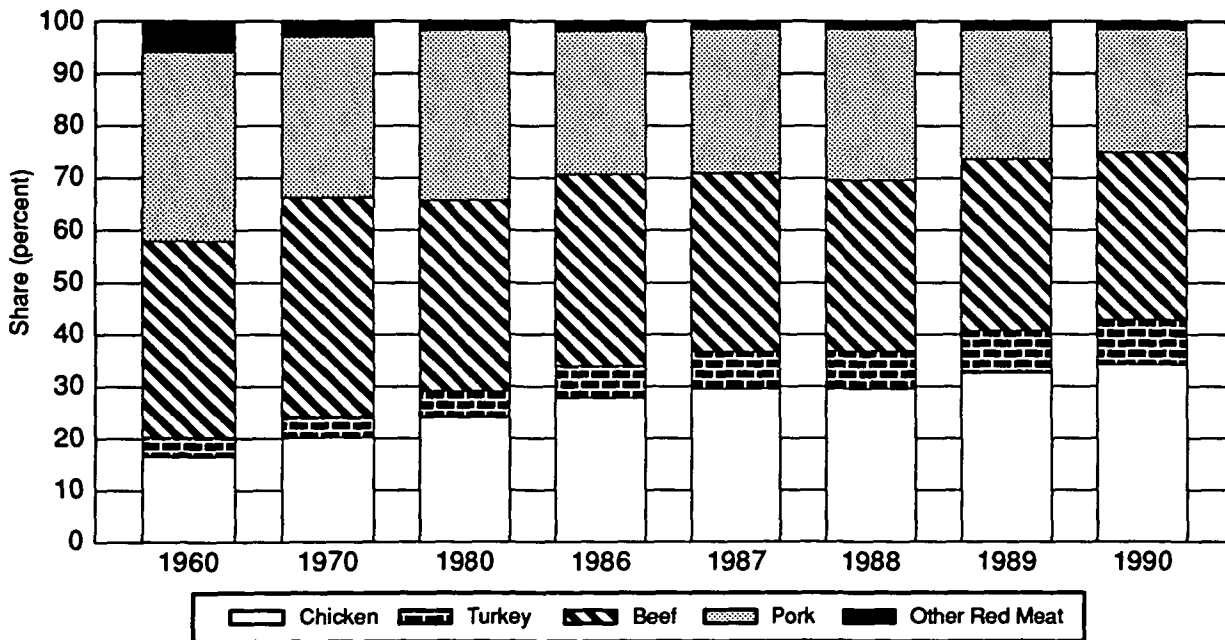
Billions of dollars



<sup>1</sup> Consumption = Shipments - Exports + Imports.

Source: Consumption and shipments estimated by the staff of the U.S. International Trade Commission; exports and imports compiled from official statistics of the U.S. Department of Commerce.

**Figure 5**  
**Poultry and red meat: Share of U.S. per capita consumption, 1960, 1970, 1980, and 1986-90**



Source: Based on official statistics of the USDA.

4,300 metric tons, valued at \$19.9 million, in 1990 (table B-19). A general decline in surplus poultry meat supplies in the leading source, Canada, which maintains a supply management regime, accounted for the bulk of the decline.

Canada, by far, is the primary foreign supplier of U.S. imports of live poultry. During the period under review, Canada accounted for virtually all such imports, with a minuscule amount being supplied by the Netherlands, Spain, and Germany (table B-18). Canada is also the primary supplier of U.S. imports of poultry meat. During 1986-90, Canada supplied 55 percent of the quantity of U.S. imports of poultry meat (table B-19). Other major suppliers include Israel and France.

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. importers of poultry meat generally fall into two categories and include poultry processors along the Canadian border who utilize spent laying hens for further processing and importers of poultry specialty products.

## FOREIGN MARKETS

### Foreign Market Profile

The world market for poultry has grown tremendously in modern times. A combination of technological advances that lowered poultry production costs, rising global incomes both in developed and developing nations, changes in marketing channels, and changes in consumer preferences have led to an increase in world demand for poultry. This rise in global demand for poultry resulted in a trebling in the world market during the past 20 years. Poultry has been transformed from a high-cost, luxury food served on special occasions to an economical, daily part of the diet in most of the world.

World consumption of poultry meat increased by nearly a quarter during 1986-90, from 28.9 million metric tons to 35.9 million metric tons (table B-8). The United States is the major market, accounting for 29 percent of the total in 1990. Following the United States are the EC (collectively), the Soviet Union, China, and Brazil. These markets are also the primary global producers of poultry meat, and the EC and Brazil are among the principal poultry exporters.

### *European Community*

The EC is the second-leading world market for poultry. In 1990, the EC accounted for 17 percent of total world poultry consumption (table B-8). The EC poultry market comprises two tiers. The first tier consists of the larger, more populous members that are the principal EC poultry markets—France, the United Kingdom, Italy, Germany, and Spain. These members together accounted for 85 percent of total EC poultry

consumption in 1990. The second tier of the EC poultry market comprises smaller, less populous countries that account for relatively minor shares of poultry consumption.

The EC market has experienced substantial growth for the reasons discussed above. During 1970-90, EC poultry consumption expanded by nearly 90 percent. Consumption rose by 20 percent during 1986-90 alone. Per capita poultry consumption in the EC ranged from 11.7 kilograms in Denmark to 23.0 kilograms in Spain (table B-11). The EC poultry market is supplied mainly by member countries, as import barriers are prohibitive and production is more than sufficient to meet internal demand. U.S. exports generally are not competitive in the EC market for these reasons. Excluding intra-EC trade, imports accounted for 3 percent of EC poultry consumption in 1990 (tables B-11, B-20).

### *Soviet Union*

The Soviet Union is the world's third-largest market for poultry and has recently been the leading market for U.S. poultry exports. Although the Soviet poultry market tripled during the past 20 years, growth has recently slowed because of economic difficulties that have limited domestic production as well as the availability of imports. Soviet poultry consumption increased from 3.2 million metric tons in 1986 to 3.6 million metric tons in 1990, or by 13 percent (table B-8). In 1990, the Soviet Union accounted for 10 percent of total world poultry consumption. Per capita consumption in the Soviet Union was relatively stable during the period under review and totaled 12.3 kilograms in 1990 (table B-11).

Soviet poultry imports traditionally were supplied mainly by countries in the Council for Mutual Economic Assistance (CMEA), with Hungary supplying 59 percent of the quantity in 1989; Bulgaria, 12 percent; and Romania, 4 percent.<sup>26</sup> Most of the trade was conducted in "transferable rubles," which basically was an accounting system to value barter and countertrade; Soviet poultry imports were generally paid for by raw material exports. However, market reforms in CMEA countries beginning in 1989, the dissolution of the CMEA in 1991, which changed the pricing and financing of poultry imports, and current Soviet economic difficulties have shifted Soviet poultry imports from CMEA countries to other sources.

The United States became the primary supplier of Soviet poultry imports in 1990. The United States traditionally had not been a major supplier of poultry to the Soviet Union, mainly because of hard currency considerations, the desire by the Soviets to maintain self-sufficiency in poultry production, and the trade embargo in 1980 that damaged the reputation of the United States as a reliable supplier.<sup>27</sup> However, due to recent economic developments in the Soviet Union and

<sup>26</sup> USDA, ERS, *USSR Agriculture and Trade Report*, Situation and Outlook Series, May 1991, p. 27.

<sup>27</sup> The embargo directly affected U.S. poultry exports of at least 143 million pounds.

Central and Eastern Europe that disrupted traditional regional trade patterns, the Soviet Union began to import poultry from alternative sources. Beginning in the fall of 1989, the Soviet Union began to import chicken parts and turkey from the United States and whole broilers from the EC and Brazil.<sup>28</sup> The United States provided export credits in financing a large part of its trade. Economic uncertainties in the Soviet Union, particularly with respect to hard currency, may limit the potential of this market for future U.S. poultry exports.

### China

China is the world's fourth-leading poultry market. Chinese poultry consumption increased the greatest among the top world markets during 1986-90, from 1.9 million metric tons to 3.2 million metric tons, or by 70 percent (table B-8). China accounted for 9 percent of the world poultry market in 1990. The size of the Chinese poultry market has been determined by sheer population rather than by consumer demand for poultry. Per capita poultry consumption totaled a relatively low 2.9 kilograms in 1990; however, this level was up by 61 percent from the 1986 level of 1.8 kilograms (table B-11).<sup>29</sup> The Chinese poultry market comprises four main sectors—households, local restaurants, fast-food restaurants, and the hotel trade. The demand for poultry in the household sector is relatively low, with per capita household consumption at 1.28 kilograms in 1989.<sup>30</sup> Demand is low mainly because of the relatively high cost of poultry to the average Chinese household. Most poultry consumption in China occurs in fast-food and other restaurants. Domestic production supplies the great bulk of the Chinese poultry market; imports accounted for only 2 percent of consumption in 1990. Limited disposable income, hard currency considerations, and consumer preference for pork limit the potential for U.S. poultry exports to the Chinese market.

### Brazil

Brazil expanded into the world's fifth-leading poultry market largely as a result of export development. Brazilian poultry consumption rose by 45 percent during 1986-90 and accounted for 6 percent of the world total in 1990 (table B-8). Per capita consumption rose by one-third during the period (table B-11). The Brazilian market prefers frozen poultry, mainly as the result of the limited effect of inflation on frozen versus fresh poultry.<sup>31</sup> The Brazilian poultry market is supplied almost totally by domestic production. Ample domestic production and relatively

high tariff rates (20 percent ad valorem), past trade disputes regarding export subsidies in third-country markets, and continuing poultry export competition between the United States and Brazil have limited opportunities for U.S. poultry exports to Brazil.

### Japan

Although Japan is the sixth-leading world poultry market, it was the leading U.S. poultry export market for most of the period during 1986-90. Japanese poultry consumption remained relatively flat during the period, particularly since 1988. In 1990, Japan accounted for 5 percent of the world poultry market (table B-8). Per capita poultry consumption in Japan rose from 12.9 kilograms in 1986 to 14.2 kilograms in 1988, where it remained for the next 3 years (table B-11). Competition from fish, the traditionally preferred meat item, and red meat, which is gaining in popularity, contributed to the stagnant demand for poultry in Japan. Japanese consumers prefer boneless poultry meat, a product form that makes up an estimated 80 percent of the market.<sup>32</sup> In addition, more than half of poultry consumption occurs away from home. A large portion of this share is accounted for by fast-food restaurants, which are gaining in popularity.

Japan is a major world poultry importer, as domestic production is unable to meet demand. In 1990, imports accounted for 17 percent of consumption, up from 12 percent in 1986. Despite relatively high import tariffs (10 to 14 percent ad valorem for most poultry items), U.S. poultry exports are competitive in Japan because of relatively high domestic prices that result from high production costs. However, most U.S. exports are of bone-in chicken legs, which fetch significantly lower prices than does poultry produced in Japan. In addition, U.S. exports are facing increasing competition from Thailand in the Japanese market, particularly with respect to boneless products. Thailand possesses a competitive advantage in the Japanese poultry market over the United States with respect to labor costs and transportation. On the other hand, Thai exports have been somewhat constrained by feed availability and pesticide-residue problems. Brazil has also been increasing its poultry exports to Japan. As a result, the U.S. share of Japanese imports declined from 59 percent in 1980 to 44 percent in 1988.<sup>33</sup>

### U.S. Exports

The U.S. poultry industry historically has been oriented toward the domestic market, which is the largest and most affluent in the world. U.S. exports of poultry typically accounted for less than 5 percent of production in the past, and U.S. poultry producers generally have been unwilling to adapt to different requirements of various export markets. However, U.S. poultry exports reached record levels during the period under review, because domestic competition has been

<sup>28</sup> USDA, FAS, *USSR 1990 Annual Poultry Report*, Report #UR0057, U.S. Embassy, Moscow, Aug. 15, 1990, p. 2.

<sup>29</sup> The Chinese market overwhelmingly prefers pork to poultry; per capita consumption of pork was about 20 kilograms in 1990.

<sup>30</sup> USDA, FAS, *China Poultry Annual*, U.S. Embassy, Beijing, July 18, 1991, p. 10.

<sup>31</sup> Bishop and others, *The World Poultry Market*, pp. 16-17.

<sup>32</sup> *Ibid.*, p. 19.

<sup>33</sup> *Ibid.*, p. 23.

increasing and U.S. producers have increased efforts in foreign markets. In addition, the ability of U.S. producers to quickly increase production to take advantage of market opportunities on short notice contributed to recent export increases. And, a rising U.S. surplus of dark poultry meat cuts resulting from a combination of a domestic market preference for white poultry meat and an increase in domestic further processing that utilizes mostly white meat cuts has impelled U.S. poultry producers to seek and develop export markets. U.S. poultry exporters have capitalized on opportunities in the Soviet Union, Canada, and Mexico, among other markets, to reach record export levels in recent years. During 1986-90, the United States was the second-leading poultry exporter in the world, trailing only the EC. In 1990, the United States surpassed France to become the world's leading single-country poultry exporter (table B-21).

The United States exports significant amounts of both live poultry and poultry meat. Live poultry exports consist mainly of baby chickens of breeder stock (both meat-type and egg-type) to the adjacent markets of Canada and Mexico and to other major world poultry-producing countries, such as Brazil. Some grow-out stock and spent laying hens are also exported, mainly to Canada and Mexico. Poultry meat exports consist mainly of broiler meat, with an increasing trend away from exports of frozen, whole broilers to broiler parts, particularly of dark meat cuts. A significant amount of turkey meat is also exported, mainly in parts.

U.S. exports of live poultry more than doubled during 1986-90, from 25 million head, valued at \$54 million, in 1986 to 54 million head, valued at \$101 million, in 1990 (table B-22). The main markets are Canada (which accounted for 40 percent of the quantity in 1990), Mexico (13 percent), Japan (5 percent) and Brazil (4 percent). The largest growth in the quantity of U.S. live poultry exports during 1986-90 was to Brazil (1,183 percent), Japan (619 percent), Mexico (498 percent), and China (467 percent). These markets are expanding their domestic poultry and egg industries and rely on advanced 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 291,000 metric tons, valued at \$318 million, in 1986 to 596,000 metric tons, valued at \$674 million, in 1990 (table B-23). Major increases were registered in exports both to traditional markets, such as Canada, Japan, Hong Kong, and Saudi Arabia, and to relatively new or irregular markets, such as the Soviet Union and Mexico.

In terms of value, Canada became the major export market in 1990; U.S. poultry meat exports to Canada rose from 33,000 metric tons, valued at \$22 million, in 1986 to 51,000 metric tons, valued at \$126 million, in 1990 (table B-23). This increase represented a rise of 128 percent in quantity and 277 percent in value. Such

exports increased by 23 percent in quantity and 98 percent in value in 1990 alone. Rapidly increasing demand for poultry in Canada and a domestic supply that is constrained by domestic production quotas, as well as import quotas under a supply management regime, led to higher Canadian prices. In addition, the United States was granted increases in its supplemental poultry import quotas. Consequently, U.S. exports, particularly in terms of value, increased significantly. The unit value of U.S. poultry meat exports to Canada, which ranged between \$1.42 and \$1.52 per kilogram during 1986-89, soared to \$2.45 per kilogram in 1990. Although U.S. poultry meat exports to Canada rose substantially during 1986-90, such exports were limited by quantitative restrictions imposed on imports by Canada's supply management regimes for chicken and turkey. The Canadian Government is currently reviewing the supply management regime; prospects for future U.S. poultry exports to Canada will depend on this review.

U.S. exports of poultry meat to Japan, the second-leading market in 1990, rose substantially, from 79,000 metric tons, valued at \$94 million, in 1986 to 156,000 metric tons, valued at \$146 million, in 1989. Japan was the leading market during this period (table B-23). Japan is an attractive market for U.S. poultry exporters, because exports to Japan consist of relatively high-valued, further-processed items. In 1990, exports fell by 37 percent in quantity and 16 percent in value, and Japan became the second-leading market in terms of quantity and value. The decline was caused by increased competition from Brazil, Thailand, and China in the Japanese market as well as by increased exports to other markets, such as Canada, the Soviet Union, and Saudi Arabia.

The Soviet Union became the third-leading foreign market for U.S. poultry exports in terms of value and the leading market in terms of quantity in 1990. U.S. poultry meat exports to the Soviet Union, which were virtually nil during 1986-88, jumped to 12,000 metric tons, valued at \$9 million, in 1989 and then escalated to 138,000 metric tons, valued at \$98 million, in 1990 (table B-23). The aforementioned economic and political developments regarding Central and Eastern Europe and the Soviet Union led to this rise. In addition, U.S. export credits financed the bulk of these exports. It is uncertain whether U.S. poultry exports to the Soviet market will remain at these levels given the current Soviet economic difficulties. U.S. exports compete in the Soviet market with those from the EC, Hungary, and Brazil, all of which benefit from government incentives.

U.S. exports of poultry meat to other markets generally increased during 1986-90. The U.S. poultry industry is increasing its emphasis on global markets, particularly in areas with high growth potential compared with more mature markets such as the United States.

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.

## **U.S. TRADE BALANCE**

The U.S. trade balance for poultry is positive and growing. During 1986-90, this balance grew from \$341 million the former year to \$747 million the latter year, or by 119 percent (table B-24). Virtually all of the improvement in the balance of trade was accounted for by increased exports, which rose from \$372 million in 1986 to \$775 million in 1990, as imports were relatively constant during the period. The balance of trade improved for virtually every major market during the period.

**APPENDIX A**  
**EXPLANATION OF TARIFF AND TRADE AGREEMENT TERMS**

## TARIFF AND TRADE AGREEMENT TERMS

The *Harmonized Tariff Schedule of the United States* (HTS) replaced the *Tariff Schedules of the United States* (TSUS) effective January 1, 1989. Chapters 1 through 97 are based on the internationally adopted Harmonized Commodity Description and Coding System through the 6-digit level of product description, with additional U.S. product subdivisions at the 8-digit level. Chapters 98 and 99 contain special U.S. classification provisions and temporary rate provisions, respectively.

Rates of duty in the *general* subcolumn of HTS column 1 are most-favored-nation (MFN) rates; for the most part, they represent the final concession rate from the Tokyo Round of Multilateral Trade Negotiations. Column 1-general duty rates are applicable to imported goods from all countries except those enumerated in general note 3(b) to the HTS, whose products are dutied at the rates set forth in *column 2*. Goods from the People's Republic of China, Czechoslovakia, Hungary, Poland, and Yugoslavia are among those eligible for MFN treatment. Among articles dutiable at column 1-general rates, particular products of enumerated 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 column 1.

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 and renewed in the Trade and Tariff Act of 1984, applies to merchandise imported on or after January 1, 1976, and before July 4, 1993. Indicated by the symbol "A" or "A\*" in the special subcolumn of column 1, the GSP provides duty-free entry to eligible articles the product of and imported directly from designated beneficiary developing countries, as set forth in general note 3(c)(ii) 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; this tariff preference program has no expiration date. Indicated by the symbol "E" or "E\*" in the special subcolumn of column 1, the CBERA provides duty-free entry to eligible articles the product of and imported directly from designated countries, as set forth in general note 3(c)(v) to the HTS.

Preferential rates of duty in the special subcolumn of column 1 followed by the symbol "IL" are applicable to products of Israel under the *United States-Israel Free-Trade Area Implementation Act* of 1985, as provided in general note 3(c)(vi) of the HTS. When no rate of duty is provided for products of Israel in the special subcolumn for a particular provision, the rate of duty in the general subcolumn of column 1 applies.

Preferential rates of duty in the special duty rates subcolumn of column 1 followed by the symbol "CA" are applicable to eligible goods originating in the territory of Canada under the *United States-Canada Free-Trade Agreement*, as provided in general note 3(c)(vii) to the HTS.

Other special tariff treatment applies to particular *products of insular possessions* (general note 3(a)(iv)), goods covered by the *Automotive Products Trade Act* (general note 3(c)(iii)) and the *Agreement on Trade in Civil Aircraft* (general note 3(c)(iv)), and *articles imported from freely associated states* (general note 3(c)(viii)).

The *General Agreement on Tariffs and Trade* (GATT) (61 Stat. (pt. 5) A58; 8 UST (pt. 2) 1786) is the multilateral agreement setting forth basic principles governing international trade among its more than 90 signatories. The GATT's main obligations relate to most-favored-nation treatment, the maintenance of scheduled concession rates of duty, and national (nondiscriminatory) treatment for imported products. The GATT also provides the legal framework for customs valuation standards, "escape clause" (emergency) actions, anti-dumping and countervailing duties, and other measures. Results of GATT-sponsored 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.

Officially known as "The Arrangement Regarding International Trade in Textiles," the *Multifiber Arrangement* (MFA) provides a framework for the negotiation of bilateral agreements between importing and producing countries or for unilateral action by importing countries in the absence of an agreement. These bilateral agreements estab-

lish quantitative limits on imports of textiles and apparel of cotton and other vegetable fibers, wool, manmade fibers, and silk blends in order to prevent market disruption in the importing countries—restrictions that would otherwise be a departure from GATT provisions. The United States has bilateral agreements with more than 30 supplying countries, including the four largest suppliers: China, Hong Kong, the Republic of Korea, and Taiwan.



**APPENDIX B**  
**STATISTICAL TABLES**

**Table B-1**  
**Poultry: Number of Federally inspected plants, by types, as of Sept. 30 of 1986-90**

| Type                              | 1986         | 1987         | 1988         | 1989         | 1990         |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Poultry only:</b>              |              |              |              |              |              |
| Slaughtering .....                | 176          | 164          | 164          | 164          | 164          |
| Processing .....                  | 244          | 234          | 216          | 218          | 209          |
| Slaughtering and processing ..... | 129          | 143          | 140          | 140          | 135          |
| <b>Total .....</b>                | <b>549</b>   | <b>541</b>   | <b>520</b>   | <b>522</b>   | <b>508</b>   |
| <b>Meat and poultry:</b>          |              |              |              |              |              |
| Slaughtering .....                | 4            | 1            | 1            | 1            | 2            |
| Processing .....                  | 2,685        | 2,731        | 2,791        | 2,843        | 2,861        |
| Slaughtering and processing ..... | 348          | 376          | 367          | 370          | 317          |
| <b>Total .....</b>                | <b>3,037</b> | <b>3,270</b> | <b>3,159</b> | <b>3,214</b> | <b>3,180</b> |

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

**Table B-2**  
**Poultry: Industry concentration in the broiler and turkey sectors, 1986-90**

(Share of production, in percent)

| Item               | 1986 | 1987 | 1988 | 1989 | 1990 |
|--------------------|------|------|------|------|------|
| <b>Broilers:</b>   |      |      |      |      |      |
| Top 4 firms .....  | 35   | 36   | 38   | 43   | 41   |
| Top 8 firms .....  | 54   | 56   | 56   | 57   | 57   |
| Top 20 firms ..... | 76   | 79   | 80   | 80   | 79   |
| <b>Turkeys:</b>    |      |      |      |      |      |
| Top 4 firms .....  | 29   | 31   | 31   | 28   | 29   |
| Top 8 firms .....  | 50   | 59   | 53   | 50   | 52   |
| Top 20 firms ..... | 87   | 88   | 90   | 90   | 89   |

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

**Table B-3**  
**Poultry: Geographic industry distribution, by sectors and regions, 1986-90**

(In percent)

| Sector and region        | 1986       | 1987       | 1988       | 1989       | 1990       |
|--------------------------|------------|------------|------------|------------|------------|
| <b>Broilers:</b>         |            |            |            |            |            |
| South Central .....      | 45         | 47         | 47         | 47         | 48         |
| South Atlantic .....     | 42         | 41         | 41         | 41         | 40         |
| All other .....          | 13         | 12         | 12         | 12         | 12         |
| <b>Total .....</b>       | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> |
| <b>Turkeys:</b>          |            |            |            |            |            |
| South Atlantic .....     | 30         | 31         | 31         | 30         | 31         |
| West North Central ..... | 29         | 29         | 28         | 28         | 28         |
| All other .....          | 41         | 40         | 41         | 42         | 42         |
| <b>Total .....</b>       | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> |

Source: USDA, ERS, *Livestock and Poultry Situation and Outlook Report*, May 1990, p. 9, and May 1991, p. 9.

**Table B-4**  
**Poultry: Geographic industry distribution, by sectors and States, 1986-90**

(In percent)

| <i>Sector and state</i> | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|-------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Broilers:</b>        |             |             |             |             |             |
| Arkansas .....          | 17          | 18          | 17          | 17          | 16          |
| Georgia .....           | 15          | 15          | 15          | 15          | 15          |
| Alabama .....           | 13          | 13          | 13          | 14          | 14          |
| North Carolina .....    | 10          | 10          | 10          | 9           | 9           |
| Mississippi .....       | 7           | 7           | 7           | 7           | 7           |
| Texas .....             | 5           | 5           | 5           | 5           | 6           |
| All other .....         | 33          | 32          | 33          | 30          | 33          |
| <b>Total</b> .....      | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  |
| <b>Turkeys:</b>         |             |             |             |             |             |
| North Carolina .....    | 19          | 20          | 20          | 20          | 20          |
| Minnesota .....         | 17          | 17          | 16          | 16          | 16          |
| California .....        | 10          | 11          | 11          | 12          | 11          |
| Arkansas .....          | 8           | 7           | 7           | 8           | 8           |
| Missouri .....          | 7           | 6           | 7           | 7           | 6           |
| Virginia .....          | 7           | 7           | 7           | 6           | 6           |
| All other .....         | 32          | 32          | 32          | 31          | 33          |
| <b>Total</b> .....      | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  |

Source: USDA, ERS, *Livestock and Poultry Situation and Outlook Report*, May 1990, p. 9, and May 1991, p. 9.

**Table B-5**  
**Poultry: Estimated costs and returns, by sectors, 1986-90**

(In cents per pound)

| <i>Sector and year</i> | <i>Production costs</i> |              | <i>Wholesale</i>   |              | <i>Net returns</i> |
|------------------------|-------------------------|--------------|--------------------|--------------|--------------------|
|                        | <i>Feed</i>             | <i>Total</i> | <i>Total costs</i> | <i>Price</i> |                    |
| <b>Broilers:</b>       |                         |              |                    |              |                    |
| 1986 .....             | 14.4                    | 22.4         | 44.3               | 56.9         | 12.6               |
| 1987 .....             | 13.4                    | 21.4         | 42.9               | 47.3         | 4.4                |
| 1988 .....             | 17.3                    | 25.3         | 48.2               | 56.2         | 8.0                |
| 1989 .....             | 18.2                    | 26.2         | 49.4               | 59.0         | 9.6                |
| 1990 .....             | 16.0                    | 24.0         | 46.4               | 54.7         | 8.3                |
| <b>Turkeys:</b>        |                         |              |                    |              |                    |
| 1986 .....             | 21.1                    | 34.8         | 59.8               | 75.1         | 15.3               |
| 1987 .....             | 19.4                    | 33.1         | 57.6               | 56.9         | -0.7               |
| 1988 .....             | 24.6                    | 38.3         | 64.2               | 62.0         | -2.2               |
| 1989 .....             | 26.7                    | 40.4         | 66.8               | 66.0         | -0.8               |
| 1990 .....             | 23.4                    | 37.1         | 62.6               | 63.2         | .5                 |

Source: USDA, ERS, *Livestock and Poultry Situation and Outlook Report*, various issues.

**Table B-6**  
**Broilers: Share of processors' shipments to various major market channels, 1981, 1983, 1985, 1987, and 1989**

(In percent)

| <i>Market channel</i>             | <i>1981</i> | <i>1983</i> | <i>1985</i> | <i>1987</i> | <i>1989</i> |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|
| Retail grocery stores .....       | 60.2        | 56.9        | 50.5        | 49.6        | 47.5        |
| Public eating places:             |             |             |             |             |             |
| Fast food restaurants .....       | 15.5        | 16.1        | 17.9        | 22.1        | 18.2        |
| All other .....                   | 4.6         | 6.2         | 9.7         | 5.5         | 7.7         |
| Total, public eating places ..... | 20.1        | 22.3        | 27.6        | 27.6        | 25.9        |
| Brokers, renderers, pet           |             |             |             |             |             |
| food, and other .....             | 1.7         | 5.0         | 5.2         | 8.7         | 13.8        |
| Further processors .....          | 6.8         | 7.3         | 6.7         | 5.7         | 7.4         |
| Exports .....                     | 7.1         | 4.4         | 2.8         | 5.4         | 3.5         |
| Government .....                  | 1.8         | 2.0         | 3.4         | 1.7         | 1.2         |
| Other institutions .....          | 2.3         | 2.1         | 3.8         | 1.3         | .7          |
| Total .....                       | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       |

Source: National Broiler Council, *Broiler Industry Marketing Practices, Calendar Year 1989*, Washington, DC, p. 6.

**Table B-7**  
**Poultry: Prices, by products, 1986-90**

| <i>Product</i>                   | <i>1986</i>      | <i>1987</i>      | <i>1988</i>      | <i>1989</i>      | <i>1990</i>      |
|----------------------------------|------------------|------------------|------------------|------------------|------------------|
| <i>(Dollars per 100)</i>         |                  |                  |                  |                  |                  |
| <b>Live:</b>                     |                  |                  |                  |                  |                  |
| <b>Chicken:</b>                  |                  |                  |                  |                  |                  |
| Meat-type chicks .....           | 17.15            | 18.18            | 16.85            | 17.43            | 18.38            |
| Egg-type chicks .....            | 51.56            | 51.83            | 50.73            | 54.80            | 50.75            |
| Turkey poults <sup>1</sup> ..... | 0.95             | 0.93             | 0.94             | 0.98             | 1.02             |
| <i>(Cents per pound)</i>         |                  |                  |                  |                  |                  |
| <b>Meat:</b>                     |                  |                  |                  |                  |                  |
| <b>Chicken:</b>                  |                  |                  |                  |                  |                  |
| <b>Broilers:</b>                 |                  |                  |                  |                  |                  |
| <b>Wholesale:</b>                |                  |                  |                  |                  |                  |
| Whole .....                      | 56.90            | 47.37            | 56.30            | 58.99            | 54.77            |
| <b>Parts:</b>                    |                  |                  |                  |                  |                  |
| <b>Breasts:</b>                  |                  |                  |                  |                  |                  |
| Boneless .....                   | 229.80           | 189.10           | 222.20           | 230.50           | 200.59           |
| Bone in .....                    | 102.17           | 79.25            | 103.17           | 106.83           | 95.69            |
| Legs .....                       | 47.22            | 39.37            | 41.97            | 42.33            | 43.72            |
| Wings .....                      | 46.24            | 43.68            | 51.02            | 59.06            | 64.29            |
| <b>Retail:</b>                   |                  |                  |                  |                  |                  |
| Whole .....                      | 83.50            | 78.48            | 85.37            | 92.70            | 89.93            |
| <b>Parts:</b>                    |                  |                  |                  |                  |                  |
| Breasts (bone in) .....          | 184.80           | 180.40           | 193.20           | 209.40           | 207.13           |
| Legs (bone in) .....             | 116.70           | 108.50           | 114.10           | 120.60           | 119.15           |
| Spent laying hens .....          | 54.68            | 49.56            | 52.34            | 65.96            | 58.38            |
| <b>Turkey:</b>                   |                  |                  |                  |                  |                  |
| <b>Wholesale:</b>                |                  |                  |                  |                  |                  |
| <b>Whole:</b>                    |                  |                  |                  |                  |                  |
| Young toms .....                 | 73.20            | 57.52            | 60.21            | 65.70            | 62.31            |
| Young hens .....                 | 72.16            | 57.82            | 61.23            | 66.66            | 63.18            |
| <b>Parts:</b>                    |                  |                  |                  |                  |                  |
| Drumsticks .....                 | 22.84            | 20.85            | 24.31            | 30.72            | 26.61            |
| Wings .....                      | 21.57            | 19.10            | 17.08            | 26.59            | 21.69            |
| <b>Breast:</b>                   |                  |                  |                  |                  |                  |
| Boneless .....                   | 77.00            | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 183.00           | ( <sup>2</sup> ) |
| <b>Bone in:</b>                  |                  |                  |                  |                  |                  |
| 12-14 pounds .....               | 160.67           | 160.63           | 160.67           | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| 14-16 pounds .....               | ( <sup>2</sup> ) | 150.08           | 128.60           | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| 16 pounds and up .....           | 184.25           | 195.00           | 161.33           | 170.75           | ( <sup>2</sup> ) |
| Retail (whole, frozen) .....     | 106.58           | 101.18           | 95.72            | 99.38            | 99.29            |

<sup>1</sup> Dollars per poult.

<sup>2</sup> Not available.

Source: USDA, ERS, *U.S. Egg and Poultry Statistical Series, 1960-89*, Sept. 1990; unpublished data from the USDA, ERS.

**Table B-8**  
**Poultry: World consumption, by selected countries and country groups, 1986-90<sup>1</sup>**  
*(1,000 metric tons)*

| <i>Countries and groups</i>       | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>North America:</b>             |             |             |             |             |             |
| Canada .....                      | 668         | 668         | 703         | 698         | 738         |
| Mexico .....                      | 604         | 528         | 646         | 684         | 741         |
| United States .....               | 7,966       | 8,688       | 9,110       | 9,724       | 10,418      |
| Total .....                       | 9,238       | 9,884       | 10,459      | 11,106      | 11,897      |
| Central America (Guatemala) ..... | 52          | 74          | 78          | 83          | 94          |
| <b>South America:</b>             |             |             |             |             |             |
| Argentina .....                   | 377         | 418         | 373         | 324         | 331         |
| Brazil .....                      | 1,454       | 1,649       | 1,757       | 1,891       | 2,111       |
| Venezuela .....                   | 351         | 411         | 373         | 253         | 203         |
| Total .....                       | 2,182       | 2,478       | 2,503       | 2,468       | 2,645       |
| <b>EC:</b>                        |             |             |             |             |             |
| Belgium-Luxembourg .....          | 163         | 163         | 172         | 161         | 158         |
| Denmark .....                     | 60          | 60          | 59          | 60          | 60          |
| France .....                      | 1,028       | 1,049       | 1,083       | 1,183       | 1,215       |
| Germany .....                     | 774         | 807         | 845         | 872         | 934         |
| Greece .....                      | 154         | 153         | 154         | 157         | 165         |
| Ireland .....                     | 60          | 61          | 62          | 63          | 64          |
| Italy .....                       | 955         | 988         | 1,015       | 1,050       | 1,083       |
| Netherlands .....                 | 193         | 215         | 221         | 232         | 260         |
| Portugal .....                    | 162         | 197         | 206         | 210         | 216         |
| Spain .....                       | 789         | 834         | 879         | 895         | 905         |
| United Kingdom .....              | 981         | 1,028       | 1,075       | 1,100       | 1,155       |
| Total .....                       | 5,160       | 5,555       | 5,771       | 5,983       | 6,215       |
| <b>Other Western Europe:</b>      |             |             |             |             |             |
| Austria .....                     | 87          | 93          | 90          | 92          | 93          |
| Finland .....                     | 23          | 26          | 28          | 31          | 33          |
| Sweden .....                      | 45          | 46          | 48          | 48          | 48          |
| Switzerland .....                 | 64          | 69          | 73          | 76          | 73          |
| Total .....                       | 219         | 234         | 239         | 247         | 247         |
| <b>Eastern Europe:</b>            |             |             |             |             |             |
| Bulgaria .....                    | 138         | 145         | 153         | 168         | 170         |
| Czechoslovakia .....              | 158         | 171         | 201         | 211         | 206         |
| Hungary .....                     | 245         | 252         | 251         | 243         | 235         |
| Poland .....                      | 310         | 335         | 321         | 335         | 311         |
| Romania .....                     | 390         | 325         | 257         | 254         | 463         |
| Yugoslavia .....                  | 299         | 311         | 317         | 310         | 293         |
| Total .....                       | 1,699       | 1,539       | 1,500       | 1,521       | 1,678       |
| <b>Soviet Union</b> .....         | 3,163       | 3,294       | 3,362       | 3,510       | 3,577       |
| <b>Middle East:</b>               |             |             |             |             |             |
| Iraq .....                        | 265         | 265         | 270         | 235         | 200         |
| Israel .....                      | 145         | 151         | 158         | 144         | 159         |
| Kuwait .....                      | 49          | 44          | 56          | 57          | 28          |
| Saudi Arabia .....                | 376         | 418         | 467         | 424         | 445         |
| Syria .....                       | 78          | 75          | 80          | 85          | 90          |
| Turkey .....                      | 111         | 215         | 228         | 252         | 268         |
| United Arab Emirates .....        | 39          | 36          | 39          | 40          | 41          |
| Yemen .....                       | 69          | 72          | 80          | 85          | 87          |
| Total .....                       | 1,132       | 1,276       | 1,378       | 1,322       | 1,318       |

See source at end of table.



**Table B-8—Continued**  
**Poultry: World consumption, by selected countries and country groups, 1986–90<sup>1</sup>**  
*(1,000 metric tons)*

| <i>Countries and groups</i>       | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|
| North Africa (Egypt) .....        | 210         | 384         | 314         | 279         | 260         |
| Other Africa (South Africa) ..... | 488         | 556         | 568         | 546         | 568         |
| Asia:                             |             |             |             |             |             |
| China .....                       | 1,851       | 1,982       | 2,676       | 2,795       | 3,187       |
| Hong Kong .....                   | 157         | 171         | 161         | 183         | 195         |
| India .....                       | 175         | 206         | 221         | 289         | 334         |
| Japan .....                       | 1,563       | 1,667       | 1,743       | 1,763       | 1,761       |
| South Korea .....                 | 132         | 144         | 153         | 158         | 180         |
| Philippines .....                 | 223         | 216         | 232         | 255         | 283         |
| Singapore .....                   | 100         | 97          | 97          | 96          | 94          |
| Taiwan .....                      | 349         | 399         | 417         | 459         | 471         |
| Thailand .....                    | 366         | 382         | 413         | 442         | 451         |
| Total .....                       | 4,741       | 5,058       | 5,892       | 6,151       | 6,622       |
| Oceania:                          |             |             |             |             |             |
| Australia .....                   | 362         | 400         | 399         | 406         | 417         |
| New Zealand .....                 | 48          | 47          | 50          | 54          | 58          |
| Total .....                       | 410         | 447         | 449         | 460         | 475         |
| Total, world .....                | 28,869      | 30,985      | 32,734      | 33,965      | 35,930      |

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

**Table B-9**  
**Poultry: World production, by selected countries and country groups, 1986-90<sup>1</sup>**  
*(1,000 metric tons)*

| <i>Countries and groups</i>              | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|--|-------------|-------------|-------------|-------------|-------------|
| <b>North America:</b>                    |             |             |             |             |             |
| Canada .....                             | 628         | 646         | 656         | 659         | 701         |
| Mexico .....                             | 590         | 515         | 592         | 635         | 700         |
| United States .....                      | 8,262       | 9,105       | 9,426       | 10,105      | 10,878      |
| Total .....                              | 9,480       | 10,266      | 10,674      | 11,399      | 12,279      |
| <b>Central America (Guatemala) .....</b> | 52          | 74          | 78          | 83          | 94          |
| <b>South America:</b>                    |             |             |             |             |             |
| Argentina .....                          | 370         | 410         | 370         | 315         | 335         |
| Brazil .....                             | 1,680       | 1,865       | 1,997       | 2,139       | 2,416       |
| Venezuela .....                          | 366         | 413         | 373         | 253         | 225         |
| Total .....                              | 2,416       | 2,688       | 2,740       | 2,707       | 2,976       |
| <b>EC:</b>                               |             |             |             |             |             |
| Belgium-Luxembourg .....                 | 169         | 172         | 186         | 179         | 181         |
| Denmark .....                            | 115         | 113         | 117         | 128         | 131         |
| France .....                             | 1,325       | 1,393       | 1,434       | 1,550       | 1,651       |
| Germany .....                            | 532         | 546         | 576         | 603         | 599         |
| Greece .....                             | 146         | 148         | 150         | 154         | 160         |
| Ireland .....                            | 57          | 58          | 59          | 60          | 60          |
| Italy .....                              | 940         | 982         | 996         | 1,025       | 1,069       |
| Netherlands .....                        | 442         | 471         | 485         | 491         | 525         |
| Portugal .....                           | 162         | 197         | 205         | 207         | 213         |
| Spain .....                              | 759         | 790         | 829         | 831         | 836         |
| United Kingdom .....                     | 922         | 999         | 1,056       | 1,070       | 1,087       |
| Total .....                              | 5,413       | 5,869       | 6,093       | 6,298       | 6,512       |
| <b>Other Western Europe:</b>             |             |             |             |             |             |
| Austria .....                            | 73          | 75          | 75          | 75          | 78          |
| Finland .....                            | 22          | 27          | 28          | 31          | 33          |
| Sweden .....                             | 45          | 46          | 47          | 47          | 47          |
| Switzerland .....                        | 28          | 29          | 31          | 33          | 33          |
| Total .....                              | 168         | 177         | 181         | 186         | 191         |
| <b>Eastern Europe:</b>                   |             |             |             |             |             |
| Bulgaria .....                           | 167         | 169         | 183         | 198         | 200         |
| Czechoslovakia .....                     | 176         | 181         | 211         | 216         | 211         |
| Hungary .....                            | 445         | 470         | 465         | 420         | 426         |
| Poland .....                             | 332         | 343         | 351         | 348         | 328         |
| Romania .....                            | 455         | 425         | 370         | 365         | 425         |
| Yugoslavia .....                         | 329         | 323         | 330         | 320         | 295         |
| Total .....                              | 2,060       | 1,911       | 1,910       | 1,867       | 1,885       |
| <b>Soviet Union .....</b>                | 2,988       | 3,126       | 3,184       | 3,300       | 3,300       |
| <b>Middle East:</b>                      |             |             |             |             |             |
| Iraq .....                               | 239         | 211         | 235         | 225         | 200         |
| Israel .....                             | 152         | 157         | 178         | 171         | 173         |
| Kuwait .....                             | 19          | 19          | 20          | 21          | 18          |
| Saudi Arabia .....                       | 196         | 236         | 248         | 240         | 265         |
| Syria .....                              | 78          | 75          | 80          | 85          | 90          |
| Turkey .....                             | 119         | 221         | 236         | 254         | 269         |
| United Arab Emirates .....               | 14          | 14          | 14          | 14          | 14          |
| Yemen .....                              | 67          | 70          | 80          | 85          | 87          |
| Total .....                              | 884         | 1,003       | 1,091       | 1,095       | 1,116       |

See source at end of table.

**Table B-9—Continued**  
**Poultry: World production, by selected countries and country groups, 1986-90<sup>1</sup>**  
*(1,000 metric tons)*

| <i>Countries and groups</i>       | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|
| North Africa (Egypt) .....        | 160         | 319         | 279         | 254         | 235         |
| Other Africa (South Africa) ..... | 498         | 523         | 545         | 552         | 563         |
| Asia:                             |             |             |             |             |             |
| China .....                       | 1,879       | 2,040       | 2,744       | 2,840       | 3,229       |
| Hong Kong .....                   | 42          | 40          | 35          | 34          | 32          |
| India .....                       | 175         | 206         | 221         | 289         | 334         |
| Japan .....                       | 1,421       | 1,465       | 1,471       | 1,482       | 1,451       |
| South Korea .....                 | 132         | 144         | 153         | 158         | 175         |
| Philippines .....                 | 220         | 215         | 235         | 263         | 279         |
| Singapore .....                   | 67          | 62          | 63          | 58          | 56          |
| Taiwan .....                      | 384         | 400         | 418         | 462         | 476         |
| Thailand .....                    | 431         | 464         | 511         | 553         | 595         |
| Total .....                       | 4,576       | 4,830       | 5,630       | 5,850       | 6,293       |
| Oceania:                          |             |             |             |             |             |
| Australia .....                   | 367         | 403         | 401         | 406         | 419         |
| New Zealand .....                 | 46          | 47          | 50          | 55          | 62          |
| Total .....                       | 413         | 450         | 451         | 461         | 481         |
| Total, world .....                | 29,283      | 31,442      | 33,077      | 34,341      | 36,259      |

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

Table B-10

Poultry: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1991; U.S. exports, 1990; and U.S. imports, 1990

| HTS<br>subheading | Description  | Col. 1 rate of duty<br>As of Jan. 1, 1991 |                             | U.S.<br>exports,<br>1990 | U.S.<br>imports,<br>1990 |
|-------------------|--|---|-----------------------------|--------------------------|--------------------------|
|                   |  | General                                   | Special <sup>1</sup>        |                          |                          |
|                   |  |   |                             | Million dollars          |                          |
| 0105.11.00        | Live chickens, weighing not over 185 grams each . . . . .                          | 2¢ each                                   | Free (E, IL) 1.4¢ each (CA) | 70                       | 1                        |
| 0105.11.19        | Live poultry, other than chickens, weighing not<br>over 185 grams each . . . . .   | 2¢ each                                   | Free (E, IL) 1.4¢ each (CA) | 5                        | 7                        |
| 0105.91.00        | Live chickens, weighing over 185 grams each . . . . .                              | 4.4¢/kg.                                  | Free (E, IL) 3¢ each (CA)   | 9                        | (2)                      |
| 0105.99.00        | Live poultry, other than chickens, weighing<br>over 185 grams each . . . . .       | 4.4¢/kg.                                  | Free (E, IL) 3¢ each (CA)   | 2                        | (2)                      |
| 0207.10.20        | Turkeys, not cut in pieces, fresh or chilled . . . . .                             | 18.7¢/kg.                                 | Free (E, IL) 13¢/kg. (CA)   | 3                        | (2)                      |
| 0207.10.40        | Poultry, other than turkeys, not cut in pieces,<br>fresh or chilled . . . . .      | 11¢/kg.                                   | Free (E, IL) 7.7¢/kg. (CA)  | 13                       | (2)                      |
| 0207.21.00        | Chickens, not cut in pieces, frozen . . . . .                                      | 11¢/kg.                                   | Free (E, IL) 7.7¢/kg. (CA)  | 34                       | (2)                      |
| 0207.22.20        | Turkeys, not cut in pieces, frozen, valued<br>less than 88¢/kg . . . . .           | 11¢/kg.                                   | Free (E, IL) 7.7¢/kg. (CA)  | 0                        | (2)                      |
| 0207.22.40        | Turkeys, not cut in pieces, frozen, valued<br>88¢/kg. or more . . . . .            | 12.5%                                     | Free (E, IL) 8.7% (CA)      | 0                        | 0                        |
| 0207.23.00        | Ducks, geese, and guineas, not cut in pieces, frozen . . . . .                     | 11¢/kg.                                   | Free (E, IL) 7.7¢/kg. (CA)  | 5                        | 1                        |
| 0207.31.00        | Fatty livers of geese or ducks, fresh or chilled . . . . .                         | 22¢/kg.                                   | Free (E, IL) 15.4¢/kg. (CA) | (2)                      | (2)                      |
| 0207.39.00        | Other poultry cuts and offals, fresh or chilled . . . . .                          | 22¢/kg.                                   | Free (E, IL) 15.4¢/kg. (CA) | 66                       | 1                        |
| 0207.41.00        | Cuts and offal of chickens, other than livers, frozen . . . . .                    | 22¢/kg.                                   | Free (E, IL) 15.4¢/kg. (CA) | 436                      | 1                        |
| 0207.42.00        | Cuts and offal of turkeys, other than livers, frozen . . . . .                     | 22¢/kg.                                   | Free (E, IL) 15.4¢/kg. (CA) | 17                       | 1                        |
| 0207.43.00        | Cuts and offal of ducks, geese, or guineas,<br>other than livers, frozen . . . . . | 22¢/kg.                                   | Free (E, IL) 15.4¢/kg. (CA) | 4                        | (2)                      |
| 0207.50.00        | Poultry livers, frozen . . . . .   | 22¢/kg.                                   | Free (E, IL)                | 4                        | 0                        |
| 1602.20.20        | Prepared or preserved goose liver . . . . .  | 7.7¢/kg.                                  | Free (E, IL) 3¢/kg. (CA)    | 0                        | 2                        |
| 1602.20.40(pt)    | Prepared or preserved poultry liver, other<br>than of geese . . . . .              | 5%  | Free (A, E, IL) 2% (CA)     | 0                        | 2                        |
| 1602.31.00        | Prepared or preserved turkey, other than liver . . . . .                           | 10%                                       | Free (A, E, IL) 7% (CA)     | 15                       | 4                        |
| 1602.39.00        | Prepared or preserved poultry, other than turkey,<br>other than liver . . . . .    | 10%                                       | Free (A, E, IL) 7% (CA)     | 67                       | 9                        |

<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: Generalized System of Preferences (A); United States-Canada Free-Trade Agreement (CA); Caribbean Basic Economic Recovery Act (E); and United States-Israel Free Trade Area (IL).

<sup>2</sup> Less than \$500,000.

Source: U.S. exports and imports compiled from official statistics of the U.S. Department of Commerce.

**Table B-11**  
**Poultry: World per capita consumption, by selected countries and country groups, 1986-90<sup>1</sup>**

(Kilograms)

| <i>Countries and groups</i>       | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>North America:</b>             |             |             |             |             |             |
| Canada .....                      | 26.3        | 26.0        | 27.1        | 26.6        | 27.8        |
| Mexico .....                      | 7.5         | 6.4         | 7.7         | 8.0         | 8.4         |
| United States .....               | 33.0        | 35.6        | 37.0        | 39.1        | 41.6        |
| <b>South America:</b>             |             |             |             |             |             |
| Argentina .....                   | 12.3        | 13.4        | 13.4        | 13.4        | 13.4        |
| Brazil .....                      | 10.3        | 11.5        | 12.0        | 12.6        | 13.8        |
| Venezuela .....                   | 19.8        | 22.5        | 19.9        | 13.2        | 10.3        |
| <b>EC:</b>                        |             |             |             |             |             |
| Belgium-Luxembourg .....          | 15.9        | 15.9        | 16.8        | 15.7        | 15.4        |
| Denmark .....                     | 11.7        | 11.7        | 11.5        | 11.7        | 11.7        |
| France .....                      | 18.6        | 18.9        | 19.4        | 21.1        | 21.6        |
| Germany .....                     | 9.7         | 10.5        | 11.2        | 11.4        | 11.9        |
| Greece .....                      | 15.5        | 15.3        | 15.4        | 15.7        | 16.5        |
| Ireland .....                     | 16.9        | 17.2        | 17.6        | 17.9        | 18.3        |
| Italy .....                       | 16.7        | 17.2        | 17.7        | 18.2        | 18.8        |
| Netherlands .....                 | 13.2        | 14.7        | 15.0        | 15.6        | 17.4        |
| Portugal .....                    | 15.9        | 19.2        | 20.0        | 20.3        | 20.9        |
| Spain .....                       | 20.4        | 21.5        | 22.5        | 22.9        | 23.0        |
| United Kingdom .....              | 17.3        | 18.1        | 20.6        | 19.2        | 20.1        |
| <b>Other Western Europe:</b>      |             |             |             |             |             |
| Austria .....                     | 11.5        | 12.3        | 11.8        | 12.1        | 12.2        |
| Finland .....                     | 4.7         | 5.3         | 5.7         | 6.2         | 6.6         |
| <b>Eastern Europe:</b>            |             |             |             |             |             |
| Czechoslovakia .....              | 10.2        | 11.0        | 12.9        | 13.5        | 13.1        |
| Hungary .....                     | 23.0        | 23.7        | 23.7        | 23.0        | 22.2        |
| Poland .....                      | 8.3         | 8.9         | 8.5         | 8.9         | 8.2         |
| Romania .....                     | 17.1        | 14.2        | 11.2        | 11.0        | 19.9        |
| Yugoslavia .....                  | 12.8        | 13.3        | 13.5        | 13.1        | 12.3        |
| U.S.S.R .....                     | 11.2        | 11.6        | 11.7        | 12.2        | 12.3        |
| <b>Middle East:</b>               |             |             |             |             |             |
| Iraq .....                        | 16.3        | 15.7        | 15.5        | 13.0        | 10.6        |
| Israel .....                      | 35.0        | 35.9        | 37.0        | 33.2        | 36.1        |
| Saudi Arabia .....                | 26.5        | 28.0        | 29.9        | 25.9        | 26.0        |
| Turkey .....                      | 2.1         | 4.1         | 4.2         | 4.5         | 4.7         |
| North Africa (Egypt) .....        | 4.2         | 7.6         | 6.0         | 5.2         | 4.8         |
| Other Africa (South Africa) ..... | 13.7        | 15.2        | 15.1        | 14.2        | 14.4        |
| <b>Asia:</b>                      |             |             |             |             |             |
| China .....                       | 1.8         | 1.9         | 2.5         | 2.5         | 2.9         |
| Hong Kong .....                   | 28.4        | 30.6        | 28.5        | 32.1        | 33.9        |
| Japan .....                       | 12.9        | 13.7        | 14.2        | 14.3        | 14.2        |
| Singapore .....                   | 38.7        | 37.1        | 36.6        | 35.8        | 34.5        |
| Taiwan .....                      | 17.8        | 20.1        | 20.7        | 22.6        | 22.9        |
| Thailand .....                    | 7.0         | 7.2         | 7.7         | 8.1         | 8.2         |
| <b>Oceania (Australia) .....</b>  | <b>22.6</b> | <b>24.6</b> | <b>24.2</b> | <b>24.3</b> | <b>24.6</b> |

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

**Table B-12**  
**Poultry: U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1986-90**

| Year | U.S. shipments <sup>1</sup> | U.S. exports | U.S. imports | Apparent U.S. consumption | Ratio of imports to consumption |
|------|-----------------------------|--------------|--------------|---------------------------|---------------------------------|
|      |                             |              |              |                           |                                 |
| 1986 | 10,681                      | 370          | 34           | 10,345                    | ( <sup>2</sup> )                |
| 1987 | 9,754                       | 484          | 32           | 9,302                     | ( <sup>2</sup> )                |
| 1988 | 11,783                      | 546          | 29           | 11,266                    | ( <sup>2</sup> )                |
| 1989 | 13,351                      | 598          | 26           | 12,779                    | ( <sup>2</sup> )                |
| 1990 | 13,360                      | 774          | 28           | 12,614                    | ( <sup>2</sup> )                |

<sup>1</sup> Estimated by the staff of the U.S. International Trade Commission.

<sup>2</sup> Less than 0.5 percent.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

**Table B-13**  
**Live poultry: U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1986-90**

| Year | U.S. shipments <sup>1</sup> | U.S. exports | U.S. imports | Apparent U.S. consumption | Ratio of imports to consumption |
|------|-----------------------------|--------------|--------------|---------------------------|---------------------------------|
|      |                             |              |              |                           |                                 |
| 1986 | 5,667                       | 25           | 6            | 5,648                     | ( <sup>2</sup> )                |
| 1987 | 6,071                       | 36           | 7            | 6,042                     | ( <sup>2</sup> )                |
| 1988 | 6,235                       | 44           | 6            | 6,198                     | ( <sup>2</sup> )                |
| 1989 | 6,632                       | 45           | 7            | 6,594                     | ( <sup>2</sup> )                |
| 1990 | 7,045                       | 54           | 6            | 6,998                     | ( <sup>2</sup> )                |

<sup>1</sup> Estimated by the staff of the U.S. International Trade Commission.

<sup>2</sup> Less than 0.5 percent.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

**Table B-14**  
**Poultry meat: U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1986-90**

| Year | U.S. shipments <sup>1</sup> | U.S. exports | U.S. imports | Apparent U.S. consumption | Ratio of imports to consumption |
|------|-----------------------------|--------------|--------------|---------------------------|---------------------------------|
|      |                             |              |              |                           |                                 |
| 1986 | 8,180                       | 291          | 13           | 7,902                     | ( <sup>2</sup> )                |
| 1987 | 9,017                       | 384          | 9            | 8,641                     | ( <sup>2</sup> )                |
| 1988 | 9,389                       | 408          | 8            | 8,989                     | ( <sup>2</sup> )                |
| 1989 | 10,063                      | 498          | 4            | 9,570                     | ( <sup>2</sup> )                |
| 1990 | 10,785                      | 596          | 4            | 10,193                    | ( <sup>2</sup> )                |

<sup>1</sup> Estimated by the staff of the U.S. International Trade Commission.

<sup>2</sup> Less than 0.5 percent.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

**Table B-15**  
**Poultry and red meat: U.S. per capita consumption, by item, 1960, 1970, 1980, and 1986-90**

(In kilograms, retail weight basis)

| Item                  | 1960 | 1970 | 1980 | 1986 | 1987 | 1988 | 1989 | 1990 |
|-----------------------|------|------|------|------|------|------|------|------|
| <b>Poultry:</b>       |      |      |      |      |      |      |      |      |
| Young chicken .....   | 10.7 | 16.8 | 21.5 | 25.8 | 27.6 | 28.4 | 30.3 | 31.8 |
| Other chicken .....   | 2.0  | 1.6  | 1.4  | 1.1  | 1.1  | 1.2  | 1.0  | 1.0  |
| Total .....           | 12.7 | 18.4 | 22.9 | 26.9 | 28.8 | 29.6 | 31.2 | 32.7 |
| Turkey .....          | 2.9  | 3.7  | 4.8  | 6.0  | 6.9  | 7.2  | 7.8  | 8.3  |
| Total .....           | 15.5 | 22.1 | 27.7 | 33.0 | 35.7 | 36.8 | 39.0 | 41.1 |
| <b>Red meat:</b>      |      |      |      |      |      |      |      |      |
| Beef .....            | 28.7 | 38.3 | 34.7 | 35.6 | 33.3 | 32.8 | 31.4 | 30.8 |
| Pork .....            | 27.6 | 28.1 | 30.9 | 26.6 | 26.8 | 28.8 | 23.6 | 22.6 |
| Veal .....            | 2.3  | 1.1  | .7   | .9   | .7   | .6   | .5   | .5   |
| Lamb and mutton ..... | 1.9  | 1.3  | .6   | .6   | .6   | .6   | .7   | .7   |
| Total .....           | 60.5 | 68.8 | 66.9 | 63.6 | 61.4 | 62.9 | 56.2 | 54.5 |

Source: Poultry—USDA, ERS, *U.S. Egg and Poultry Statistical Series, 1960-89*, Statistical Bulletin Number 816, Sept. 1990; for 1990 data, USDA, ERS, *Livestock and Poultry Situation and Outlook*, Report LPS-49, Aug. 1991. Red Meat—USDA, ERS, *Livestock and Meat Statistics, 1984-88*, Statistical Bulletin Number 784, Sept. 1989; for 1989-90 data, USDA, ERS, *Livestock and Poultry Situation and Outlook*, Report LPS-49, Aug. 1991.

**Table B-16**  
**Live poultry: U.S. production, by types, 1986-90**

(1,000 head)

| Type                       | 1986      | 1987      | 1988      | 1989      | 1990      |
|----------------------------|-----------|-----------|-----------|-----------|-----------|
| <b>Chickens:</b>           |           |           |           |           |           |
| Egg-type .....             | 423,721   | 427,785   | 366,235   | 382,906   | 398,961   |
| Meat-type .....            | 5,013,303 | 5,379,228 | 5,602,400 | 5,946,948 | 6,314,594 |
| Total .....                | 5,437,024 | 5,807,013 | 5,968,635 | 6,329,854 | 6,713,555 |
| Turkeys <sup>1</sup> ..... | 207,232   | 240,438   | 242,421   | 279,710   | 301,326   |
| Ducks .....                | 22,882    | 23,216    | 24,008    | 21,718    | 29,913    |
| Geese .....                | 300       | 300       | 300       | 300       | 300       |
| Total .....                | 5,667,438 | 6,070,967 | 6,235,364 | 6,631,582 | 7,045,094 |

<sup>1</sup> September of previous year through Nov. 30 of current year.

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

**Table B-17**  
**Poultry meat: U.S. production, by types, 1986-90**

| <i>Type</i>                                     | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|---|-------------|-------------|-------------|-------------|-------------|
| <i>Quantity<sup>1</sup> (million kilograms)</i> |             |             |             |             |             |
| Chicken:  |             |             |             |             |             |
| Broilers .....                                  | 6,471       | 7,032       | 7,314       | 7,863       | 8,416       |
| Other .....                                     | 240         | 251         | 245         | 261         | 256         |
| Total .....                                     | 6,711       | 7,283       | 7,559       | 8,123       | 8,672       |
| Turkey .....                                    | 1,421       | 1,686       | 1,779       | 1,894       | 2,069       |
| Other .....                                     | 48          | 48          | 51          | 46          | 44          |
| Total .....                                     | 8,180       | 9,017       | 9,389       | 10,063      | 10,785      |
| <i>Value (million dollars)</i>                  |             |             |             |             |             |
| Chicken:  |             |             |             |             |             |
| Broilers .....                                  | 8,117       | 7,343       | 9,078       | 10,227      | 10,168      |
| Other .....                                     | 302         | 262         | 305         | 339         | 310         |
| Total .....                                     | 8,419       | 7,605       | 9,383       | 10,566      | 10,478      |
| Turkey .....                                    | 2,262       | 2,148       | 2,401       | 2,785       | 2,883       |
| Other .....                                     | 76          | 61          | 69          | 67          | 61          |
| Total .....                                     | 10,757      | 9,815       | 11,852      | 13,418      | 13,421      |
| <i>Unit value (per kilogram)</i>                |             |             |             |             |             |
| Chicken:  |             |             |             |             |             |
| Broilers .....                                  | \$1.25      | \$1.04      | \$1.24      | \$1.30      | \$1.21      |
| Other .....                                     | 1.25        | 1.04        | 1.24        | 1.30        | 1.21        |
| Average .....                                   | 1.25        | 1.04        | 1.24        | 1.30        | 1.21        |
| Turkey .....                                    | 1.59        | 1.27        | 1.35        | 1.47        | 1.39        |
| Other .....                                     | 1.59        | 1.27        | 1.35        | 1.47        | 1.39        |
| Average .....                                   | 1.32        | 1.09        | 1.26        | 1.33        | 1.24        |

<sup>1</sup> Federally inspected, ready-to-cook basis.

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



**Table B-18**  
**Live poultry: U.S. Imports for consumption, by principal sources, 1986-90**

| <i>Source</i>                        | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|
| <i>Quantity (head)</i>               |             |             |             |             |             |
| World .....                          | 5,889,207   | 7,168,715   | 5,932,606   | 7,192,952   | 6,430,277   |
| Canada .....                         | 5,889,207   | 7,168,705   | 5,932,606   | 7,180,174   | 6,424,839   |
| Netherlands .....                    | 0           | 10          | 0           | 12,763      | 5,413       |
| Spain .....                          | 0           | 0           | 0           | 0           | 20          |
| Germany, West .....                  | 0           | 0           | 0           | 0           | 5           |
| Total other .....                    | 0           | 0           | 0           | 15          | 0           |
| <i>Value (dollars)</i>               |             |             |             |             |             |
| World .....                          | 9,356,862   | 9,578,083   | 7,222,028   | 9,046,610   | 8,492,953   |
| Canada .....                         | 9,343,674   | 9,561,751   | 7,133,257   | 8,998,599   | 8,468,258   |
| Netherlands .....                    | 5,470       | 2,395       | 66,496      | 44,850      | 19,825      |
| Spain .....                          | 0           | 0           | 0           | 0           | 3,170       |
| Germany, West .....                  | 0           | 1,689       | 0           | 0           | 1,700       |
| Total other .....                    | 7,718       | 12,248      | 22,275      | 3,161       | 0           |
| <i>Unit value (dollars per head)</i> |             |             |             |             |             |
| World .....                          | 1.59        | 1.34        | 1.22        | 1.26        | 1.32        |
| Canada .....                         | 1.59        | 1.33        | 1.20        | 1.25        | 1.32        |
| Netherlands .....                    | 0           | 239.50      | 0           | 3.51        | 3.66        |
| Spain .....                          | 0           | 0           | 0           | 0           | 158.50      |
| Germany, West .....                  | 0           | 0           | 0           | 0           | 340.00      |
| Total other .....                    | 0           | 0           | 0           | 210.73      | 0           |

Note.—Data before 1989 are estimated.

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

**Table B-19**  
**Poultry meat: U.S. imports for consumption, by principal sources, 1986-90**

| <i>Source</i>                            | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|--|-------------|-------------|-------------|-------------|-------------|
| <i>Quantity (kilograms)</i>              |             |             |             |             |             |
| World .....                              | 13,302,129  | 8,728,486   | 8,185,892   | 4,457,047   | 4,278,273   |
| Canada .....                             | 8,115,990   | 3,586,959   | 3,475,346   | 2,561,419   | 3,572,080   |
| Israel .....                             | 1,249,022   | 1,354,646   | 791,796     | 713,209     | 389,479     |
| France .....                             | 159,913     | 136,526     | 165,467     | 176,584     | 151,194     |
| Hong Kong .....                          | 59,203      | 64,088      | 61,344      | 19,958      | 72,453      |
| Belgium .....                            | 0           | 0           | 15,565      | 23,619      | 9,412       |
| Australia .....                          | 60,277      | 54,392      | 145,216     | 0           | 16,157      |
| Mexico .....                             | 448,107     | 588,713     | 392,168     | 0           | 64,864      |
| Sweden .....                             | 18,581      | 13,253      | 9,205       | 1,179       | 350         |
| Netherlands .....                        | 48,890      | 34,080      | 57,794      | 483         | 264         |
| Total other .....                        | 3,142,146   | 2,895,830   | 3,071,991   | 960,596     | 2,020       |
| <i>Value (dollars)</i>                   |             |             |             |             |             |
| World .....                              | 24,334,106  | 22,050,390  | 22,000,444  | 17,290,172  | 19,853,720  |
| Canada .....                             | 6,673,746   | 5,646,728   | 6,125,541   | 7,537,308   | 14,309,125  |
| Israel .....                             | 6,936,780   | 6,657,870   | 4,419,223   | 4,264,647   | 2,617,691   |
| France .....                             | 2,432,601   | 2,011,133   | 2,844,116   | 2,837,551   | 2,365,439   |
| Hong Kong .....                          | 165,193     | 131,372     | 150,732     | 127,285     | 394,635     |
| Belgium .....                            | 0           | 0           | 60,904      | 138,182     | 54,133      |
| Australia .....                          | 69,402      | 83,882      | 322,115     | 0           | 49,809      |
| Mexico .....                             | 675,897     | 829,367     | 587,925     | 0           | 36,873      |
| Sweden .....                             | 77,442      | 55,422      | 33,286      | 7,872       | 7,544       |
| Netherlands .....                        | 79,280      | 88,032      | 118,392     | 4,351       | 5,597       |
| Total other .....                        | 7,223,765   | 6,546,583   | 7,338,209   | 2,372,976   | 12,874      |
| <i>Unit value (dollars per kilogram)</i> |             |             |             |             |             |
| World .....                              | 1.83        | 2.53        | 2.69        | 3.88        | 4.64        |
| Canada .....                             | 0.82        | 1.57        | 1.76        | 2.94        | 4.01        |
| Israel .....                             | 5.55        | 4.91        | 5.58        | 5.98        | 6.72        |
| France .....                             | 15.21       | 14.73       | 17.19       | 16.07       | 15.65       |
| Hong Kong .....                          | 2.79        | 2.05        | 2.46        | 6.38        | 5.45        |
| Belgium .....                            | 0           | 0           | 3.91        | 5.85        | 5.75        |
| Australia .....                          | 1.15        | 1.54        | 2.22        | 0           | 3.08        |
| Mexico .....                             | 1.51        | 1.41        | 1.50        | 0           | 0.57        |
| Sweden .....                             | 4.17        | 4.18        | 3.62        | 6.68        | 21.55       |
| Netherlands .....                        | 1.62        | 2.58        | 2.05        | 9.01        | 21.20       |
| Total other .....                        | 2.30        | 2.26        | 2.39        | 2.47        | 6.37        |

Note.—Data before 1989 are estimated.

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

**Table B-20**  
**Poultry: World imports, by selected countries and country groups, 1986-90<sup>1</sup>**  
*(1,000 metric tons)*

| <i>Countries and groups</i>       | <i>1986</i>  | <i>1987</i>  | <i>1988</i>  | <i>1989</i>  | <i>1990</i>  |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>North America:</b>             |              |              |              |              |              |
| Canada .....                      | 38           | 41           | 43           | 42           | 53           |
| Mexico .....                      | 14           | 13           | 54           | 51           | 46           |
| <b>Total .....</b>                | <b>52</b>    | <b>54</b>    | <b>97</b>    | <b>93</b>    | <b>99</b>    |
| South America (Argentina) .....   | 23           | 22           | 1            | 1            | 0            |
| <b>EC:</b>                        |              |              |              |              |              |
| Belgium-Luxembourg .....          | 36           | 37           | 45           | 47           | 54           |
| Denmark .....                     | 4            | 4            | 3            | 6            | 8            |
| France .....                      | 30           | 38           | 55           | 71           | 67           |
| Germany .....                     | 266          | 289          | 316          | 334          | 399          |
| Greece .....                      | 5            | 5            | 5            | 7            | 10           |
| Ireland .....                     | 8            | 8            | 8            | 8            | 8            |
| Italy .....                       | 24           | 25           | 31           | 45           | 44           |
| Netherlands .....                 | 44           | 52           | 72           | 76           | 114          |
| Spain .....                       | 35           | 50           | 60           | 70           | 73           |
| United Kingdom .....              | 88           | 82           | 79           | 84           | 135          |
| <b>Total .....</b>                | <b>540</b>   | <b>590</b>   | <b>674</b>   | <b>748</b>   | <b>912</b>   |
| <b>Other Western Europe:</b>      |              |              |              |              |              |
| Austria .....                     | 14           | 18           | 15           | 17           | 15           |
| Switzerland .....                 | 36           | 40           | 43           | 43           | 40           |
| <b>Total .....</b>                | <b>50</b>    | <b>58</b>    | <b>58</b>    | <b>60</b>    | <b>55</b>    |
| <b>Eastern Europe:</b>            |              |              |              |              |              |
| Czechoslovakia .....              | 5            | 5            | 5            | 5            | 5            |
| Poland .....                      | 0            | 0            | 0            | 5            | 1            |
| Romania .....                     | 0            | 10           | 7            | 7            | 48           |
| Yugoslavia .....                  | 0            | 0            | 0            | 1            | 2            |
| <b>Total .....</b>                | <b>12</b>    | <b>15</b>    | <b>12</b>    | <b>18</b>    | <b>56</b>    |
| Soviet Union .....                | 175          | 169          | 179          | 210          | 277          |
| <b>Middle East:</b>               |              |              |              |              |              |
| Iraq .....                        | 25           | 92           | 7            | 0            | 0            |
| Kuwait .....                      | 30           | 30           | 38           | 38           | 10           |
| Saudi Arabia .....                | 183          | 184          | 194          | 194          | 203          |
| United Arab Emirates .....        | 25           | 25           | 25           | 27           | 27           |
| Yemen .....                       | 2            | 2            | 0            | 0            | 0            |
| <b>Total .....</b>                | <b>265</b>   | <b>333</b>   | <b>264</b>   | <b>259</b>   | <b>240</b>   |
| North Africa (Egypt) .....        | 50           | 65           | 25           | 25           | 25           |
| Other Africa (South Africa) ..... | 4            | 9            | 6            | 5            | 6            |
| <b>Asia:</b>                      |              |              |              |              |              |
| China .....                       | 0            | 0            | 24           | 49           | 68           |
| Hong Kong .....                   | 123          | 148          | 153          | 198          | 239          |
| Japan .....                       | 180          | 202          | 272          | 281          | 301          |
| Singapore .....                   | 41           | 45           | 46           | 48           | 52           |
| Taiwan .....                      | 0            | 3            | 4            | 0            | 0            |
| <b>Total .....</b>                | <b>344</b>   | <b>398</b>   | <b>499</b>   | <b>576</b>   | <b>660</b>   |
| <b>Total, world .....</b>         | <b>1,515</b> | <b>1,713</b> | <b>1,815</b> | <b>1,995</b> | <b>2,330</b> |

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

**Table B-21**  
**Poultry: World exports, by selected countries and country groups, 1986-90**

(1,000 metric tons)

| <i>Countries and groups</i>                          | <i>1986</i>  | <i>1987</i>  | <i>1988</i>  | <i>1989</i>  | <i>1990</i>  |
|--|--------------|--------------|--------------|--------------|--------------|
| <b>North America:</b>                                |              |              |              |              |              |
| Canada .....   | 3            | 5            | 6            | 7            | 6            |
| United States .....                                  | 276          | 363          | 382          | 398          | 554          |
| <b>Total .....</b>                                   | <b>279</b>   | <b>368</b>   | <b>388</b>   | <b>405</b>   | <b>560</b>   |
| <b>South America:</b>                                |              |              |              |              |              |
| Argentina .....                                      | 0            | 3            | 0            | 0            | 4            |
| Brazil .....   | 226          | 216          | 240          | 248          | 305          |
| Venezuela .....                                      | 20           | 0            | 0            | 0            | 22           |
| <b>Total .....</b>                                   | <b>246</b>   | <b>219</b>   | <b>240</b>   | <b>248</b>   | <b>331</b>   |
| <b>EC:</b>   |              |              |              |              |              |
| Belgium-Luxembourg .....                             | 42           | 47           | 59           | 65           | 77           |
| Denmark .....  | 57           | 59           | 62           | 71           | 79           |
| France .....   | 369          | 367          | 402          | 474          | 497          |
| Germany .....  | 31           | 38           | 47           | 58           | 79           |
| Ireland .....  | 5            | 5            | 5            | 5            | 4            |
| Italy .....  | 9            | 19           | 12           | 20           | 30           |
| Netherlands .....                                    | 289          | 308          | 337          | 340          | 376          |
| Spain .....  | 5            | 6            | 10           | 6            | 4            |
| United Kingdom .....                                 | 32           | 50           | 60           | 64           | 62           |
| <b>Total, excluding intra-EC .....</b>               | <b>264</b>   | <b>325</b>   | <b>394</b>   | <b>480</b>   | <b>531</b>   |
| <b>Total .....</b>                                   | <b>835</b>   | <b>899</b>   | <b>994</b>   | <b>1,103</b> | <b>1,208</b> |
| <b>Other Western Europe</b><br>(Switzerland) .....   | 0            | 0            | 1            | 0            | 0            |
| <b>Eastern Europe:</b>                               |              |              |              |              |              |
| Bulgaria .....                                       | 29           | 24           | 30           | 30           | 30           |
| Czechoslovakia .....                                 | 23           | 19           | 15           | 10           | 10           |
| Hungary .....  | 181          | 205          | 234          | 174          | 189          |
| Poland .....   | 13           | 16           | 23           | 18           | 21           |
| Romania .....  | 60           | 110          | 125          | 120          | 0            |
| Yugoslavia .....                                     | 13           | 17           | 12           | 15           | 11           |
| <b>Total .....</b>                                   | <b>323</b>   | <b>391</b>   | <b>439</b>   | <b>367</b>   | <b>261</b>   |
| <b>Soviet Union .....</b>                            | <b>0</b>     | <b>1</b>     | <b>1</b>     | <b>0</b>     | <b>0</b>     |
| <b>Middle East:</b>                                  |              |              |              |              |              |
| Israel .....   | 10           | 8            | 20           | 18           | 19           |
| Saudi Arabia .....                                   | 1            | 2            | 3            | 2            | 3            |
| Turkey .....   | 4            | 5            | 8            | 2            | 1            |
| <b>Total .....</b>                                   | <b>15</b>    | <b>15</b>    | <b>31</b>    | <b>22</b>    | <b>23</b>    |
| <b>Other Africa (South Africa) .....</b>             | <b>4</b>     | <b>7</b>     | <b>11</b>    | <b>11</b>    | <b>1</b>     |
| <b>Asia:</b>   |              |              |              |              |              |
| China .....  | 28           | 58           | 92           | 94           | 110          |
| Hong Kong .....                                      | 8            | 16           | 27           | 49           | 75           |
| Singapore .....                                      | 8            | 10           | 13           | 10           | 11           |
| Taiwan .....   | 2            | 4            | 4            | 4            | 5            |
| Thailand .....                                       | 65           | 82           | 98           | 111          | 144          |
| <b>Total .....</b>                                   | <b>111</b>   | <b>170</b>   | <b>234</b>   | <b>268</b>   | <b>345</b>   |
| <b>Oceania (Australia) .....</b>                     | <b>2</b>     | <b>3</b>     | <b>2</b>     | <b>1</b>     | <b>2</b>     |
| <b>Total, world (excluding intra-EC trade) .....</b> | <b>1,244</b> | <b>1,505</b> | <b>1,749</b> | <b>1,810</b> | <b>2,111</b> |
| <b>Total, world .....</b>                            | <b>1,815</b> | <b>2,073</b> | <b>2,341</b> | <b>2,425</b> | <b>2,731</b> |

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

**Table B-22**  
**Live poultry: U.S. exports of domestic merchandise, by principal markets, 1986-90**

| <i>Market</i>            | <i>1986</i>                          | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|--------------------------|--------------------------------------|-------------|-------------|-------------|-------------|
|                          | <i>Quantity (head)</i>               |             |             |             |             |
| World .....              | 25,334,146                           | 36,211,508  | 43,603,297  | 45,224,889  | 53,583,403  |
| Canada .....             | 11,952,264                           | 14,241,477  | 16,658,021  | 18,321,054  | 21,579,021  |
| Brazil .....             | 184,073                              | 1,759,261   | 1,547,718   | 2,180,300   | 2,361,647   |
| Mexico .....             | 1,157,040                            | 1,859,095   | 2,371,093   | 3,955,255   | 6,915,083   |
| China .....              | 354,990                              | 793,015     | 2,113,203   | 1,415,403   | 2,013,166   |
| Thailand .....           | 327,307                              | 425,758     | 870,756     | 937,827     | 843,064     |
| Japan .....              | 347,735                              | 1,379,416   | 1,402,185   | 1,691,240   | 2,500,939   |
| Netherlands .....        | 405,412                              | 630,848     | 1,094,755   | 816,764     | 707,960     |
| Indonesia .....          | 314,451                              | 366,029     | 524,245     | 749,069     | 867,262     |
| Dominican Republic ..... | 586,368                              | 1,094,065   | 726,424     | 950,455     | 947,871     |
| Total, other .....       | 9,704,506                            | 13,662,544  | 16,294,897  | 14,207,522  | 14,847,390  |
|                          | <i>Value (dollars)</i>               |             |             |             |             |
| World .....              | 54,053,049                           | 75,561,797  | 83,687,692  | 81,609,323  | 101,217,738 |
| Canada .....             | 11,891,491                           | 13,877,852  | 15,640,947  | 18,820,954  | 27,420,960  |
| Brazil .....             | 2,087,024                            | 9,098,346   | 8,700,782   | 9,434,462   | 10,480,678  |
| Mexico .....             | 4,117,414                            | 3,575,526   | 4,473,872   | 4,711,948   | 6,707,330   |
| China .....              | 1,314,366                            | 2,829,495   | 6,654,740   | 4,088,886   | 5,584,138   |
| Thailand .....           | 2,183,788                            | 2,234,443   | 3,272,234   | 3,742,156   | 4,675,752   |
| Japan .....              | 3,311,354                            | 5,777,075   | 4,655,442   | 4,041,145   | 3,399,121   |
| Netherlands .....        | 2,483,352                            | 3,106,617   | 3,308,376   | 2,945,159   | 2,851,123   |
| Indonesia .....          | 1,937,100                            | 2,533,283   | 1,824,059   | 2,263,925   | 2,735,649   |
| Dominican Republic ..... | 1,544,401                            | 1,964,135   | 1,654,203   | 2,009,530   | 2,394,465   |
| Total, other .....       | 23,182,759                           | 30,565,025  | 33,503,037  | 29,551,158  | 34,968,522  |
|                          | <i>Unit value (dollars per head)</i> |             |             |             |             |
| Average .....            | 2.13                                 | 2.09        | 1.92        | 1.80        | 1.89        |
| Canada .....             | 0.99                                 | 0.97        | 0.94        | 1.03        | 1.27        |
| Brazil .....             | 11.34                                | 5.17        | 5.62        | 4.33        | 4.44        |
| Mexico .....             | 3.56                                 | 1.92        | 1.89        | 1.19        | 0.97        |
| China .....              | 3.70                                 | 3.57        | 3.15        | 2.89        | 2.77        |
| Thailand .....           | 6.67                                 | 5.25        | 3.76        | 3.99        | 5.55        |
| Japan .....              | 9.52                                 | 4.19        | 3.32        | 2.39        | 1.36        |
| Netherlands .....        | 6.13                                 | 4.92        | 3.02        | 3.61        | 4.03        |
| Indonesia .....          | 6.16                                 | 6.92        | 3.48        | 3.02        | 3.15        |
| Dominican Republic ..... | 2.63                                 | 1.80        | 2.28        | 2.11        | 2.53        |
| Total, other .....       | 2.39                                 | 2.24        | 2.06        | 2.08        | 2.36        |

Note.—Data before 1989 are estimated.

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

**Table B-23**  
**Poultry meat: U.S. exports of domestic merchandise, by principal markets, 1986-90**

| <i>Market</i>       | <i>1986</i>                              | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|---------------------|--|-------------|-------------|-------------|-------------|
|                     | <i>Quantity (kilograms)</i>              |             |             |             |             |
| World .....         | 291,045,137                              | 384,048,934 | 408,395,661 | 497,958,005 | 596,219,911 |
| Canada .....        | 22,465,654                               | 28,253,750  | 30,966,670  | 41,707,134  | 51,261,109  |
| Japan .....         | 78,829,705                               | 80,240,141  | 120,215,134 | 156,237,393 | 98,117,087  |
| Soviet Union .....  | 15                                       | 0           | 0           | 12,161,189  | 137,524,596 |
| Hong Kong .....     | 37,189,081                               | 57,396,572  | 49,109,789  | 97,666,150  | 88,401,324  |
| Mexico .....        | 16,183,369                               | 15,216,446  | 54,915,445  | 51,877,588  | 56,481,740  |
| Singapore .....     | 25,723,805                               | 24,781,630  | 26,170,898  | 26,943,512  | 24,243,201  |
| Saudi Arabia .....  | 2,531,651                                | 2,518,967   | 2,297,378   | 2,757,123   | 7,530,651   |
| Neth Antilles ..... | 6,036,785                                | 9,534,261   | 7,107,596   | 7,429,394   | 8,248,566   |
| Spain .....         | 1,648,914                                | 5,383,461   | 5,888,764   | 5,648,927   | 10,257,238  |
| Total, other .....  | 100,436,157                              | 160,723,706 | 111,723,987 | 95,529,595  | 114,154,399 |
|                     | <i>Value (dollars)</i>                   |             |             |             |             |
| World .....         | 318,153,888                              | 411,828,956 | 467,016,579 | 518,006,267 | 674,259,609 |
| Canada .....        | 33,320,981                               | 40,111,587  | 46,248,153  | 63,392,116  | 125,638,795 |
| Japan .....         | 94,035,088                               | 95,618,501  | 147,463,760 | 145,906,410 | 123,199,749 |
| Soviet Union .....  | 80                                       | 0           | 0           | 9,299,333   | 97,628,372  |
| Hong Kong .....     | 40,108,621                               | 57,879,382  | 50,601,048  | 96,102,861  | 88,478,371  |
| Mexico .....        | 14,531,103                               | 16,116,139  | 63,569,940  | 53,551,798  | 57,382,792  |
| Singapore .....     | 28,639,849                               | 26,771,414  | 27,121,340  | 30,275,437  | 28,944,756  |
| Saudi Arabia .....  | 3,780,911                                | 3,904,348   | 3,475,293   | 3,477,842   | 10,114,957  |
| Neth Antilles ..... | 8,560,269                                | 12,636,854  | 10,006,783  | 9,841,084   | 9,916,264   |
| Spain .....         | 1,631,311                                | 5,249,043   | 5,541,233   | 5,738,837   | 9,022,770   |
| Total, other .....  | 93,545,674                               | 153,541,689 | 112,989,027 | 100,420,549 | 123,932,783 |
|                     | <i>Unit value (dollars per kilogram)</i> |             |             |             |             |
| Average .....       | 1.09                                     | 1.07        | 1.14        | 1.04        | 1.13        |
| Canada .....        | 1.48                                     | 1.42        | 1.49        | 1.52        | 2.45        |
| Japan .....         | 1.19                                     | 1.19        | 1.23        | 0.93        | 1.26        |
| Soviet Union .....  | 5.20                                     | 0           | 0           | 0.76        | 0.71        |
| Hong Kong .....     | 1.08                                     | 1.01        | 1.03        | 0.98        | 1.00        |
| Mexico .....        | 0.90                                     | 1.06        | 1.16        | 1.03        | 1.02        |
| Singapore .....     | 1.11                                     | 1.08        | 1.04        | 1.12        | 1.19        |
| Saudi Arabia .....  | 1.49                                     | 1.55        | 1.51        | 1.26        | 1.34        |
| Neth Antilles ..... | 1.42                                     | 1.33        | 1.41        | 1.32        | 1.20        |
| Spain .....         | 0.99                                     | 0.98        | 0.94        | 1.02        | 0.88        |
| Total, other .....  | 0.93                                     | 0.96        | 1.01        | 1.05        | 1.09        |

Note.—Data before 1989 are estimated.

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

Table B-24

Poultry: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1986-90<sup>1</sup>

| (Million dollars)                     |            |            |            |            |            |
|---------------------------------------|------------|------------|------------|------------|------------|
| Item                                  | 1986       | 1987       | 1988       | 1989       | 1990       |
| U.S. exports of domestic merchandise: |            |            |            |            |            |
| Canada .....                          | 45         | 54         | 62         | 82         | 153        |
| Japan .....                           | 97         | 101        | 152        | 150        | 127        |
| Soviet Union .....                    | 0          | 0          | 0          | 9          | 98         |
| Hong Kong .....                       | 40         | 59         | 52         | 97         | 90         |
| Mexico .....                          | 19         | 20         | 68         | 58         | 64         |
| Singapore .....                       | 29         | 27         | 28         | 31         | 29         |
| Spain .....                           | 4          | 8          | 8          | 8          | 11         |
| Brazil .....                          | 2          | 9          | 9          | 9          | 10         |
| Saudi Arabia .....                    | 4          | 4          | 4          | 4          | 10         |
| Netherlands Antilles .....            | 0          | 0          | 10         | 10         | 10         |
| All other .....                       | 132        | 205        | 158        | 142        | 173        |
| <b>Total .....</b>                    | <b>372</b> | <b>487</b> | <b>551</b> | <b>600</b> | <b>775</b> |
| EC-12 .....                           | 19         | 23         | 26         | 25         | 35         |
| OPEC .....                            | 10         | 74         | 18         | 13         | 24         |
| ASEAN .....                           | 37         | 37         | 37         | 40         | 41         |
| CBERA .....                           | 53         | 53         | 72         | 72         | 63         |
| Eastern Europe .....                  | 1          | 0          | 1          | 1          | 11         |
| U.S. imports for consumption:         |            |            |            |            |            |
| Canada .....                          | 16         | 15         | 13         | 16         | 23         |
| Japan .....                           | 2          | 2          | 2          | 0          | 0          |
| Soviet Union .....                    | 0          | 0          | 0          | 0          | 0          |
| Hong Kong .....                       | 0          | 0          | 0          | 0          | 0          |
| Mexico .....                          | 1          | 1          | 1          | 0          | 0          |
| Singapore .....                       | 0          | 0          | 0          | 0          | 0          |
| Spain .....                           | 0          | 0          | 0          | 0          | 0          |
| Brazil .....                          | 0          | 0          | 0          | 0          | 0          |
| Saudi Arabia .....                    | 0          | 0          | 0          | 0          | 0          |
| Netherlands Antilles .....            | 0          | 0          | 0          | 0          | 0          |
| All other .....                       | 13         | 12         | 12         | 10         | 5          |
| <b>Total .....</b>                    | <b>31</b>  | <b>29</b>  | <b>28</b>  | <b>26</b>  | <b>28</b>  |
| EC-12 .....                           | 5          | 4          | 5          | 5          | 2          |
| OPEC .....                            | 0          | 0          | 0          | 0          | 0          |
| ASEAN .....                           | 1          | 1          | 1          | 0          | 0          |
| CBERA .....                           | 0          | 0          | 0          | 0          | 0          |
| Eastern Europe .....                  | 0          | 0          | 0          | 0          | 0          |
| U.S. merchandise trade balance:       |            |            |            |            |            |
| Canada .....                          | 29         | 39         | 49         | 66         | 130        |
| Japan .....                           | 95         | 99         | 150        | 150        | 127        |
| Soviet Union .....                    | 0          | 0          | 0          | 9          | 98         |
| Hong Kong .....                       | 40         | 59         | 52         | 97         | 90         |
| Mexico .....                          | 18         | 19         | 67         | 58         | 64         |
| Singapore .....                       | 29         | 27         | 28         | 31         | 29         |
| Spain .....                           | 4          | 8          | 8          | 8          | 11         |
| Brazil .....                          | 2          | 9          | 9          | 9          | 10         |
| Saudi Arabia .....                    | 4          | 4          | 4          | 4          | 10         |
| Netherlands Antilles .....            | 0          | 0          | 10         | 10         | 10         |
| All other .....                       | 119        | 193        | 146        | 132        | 168        |
| <b>Total .....</b>                    | <b>341</b> | <b>458</b> | <b>523</b> | <b>574</b> | <b>747</b> |
| EC-12 .....                           | 14         | 19         | 21         | 20         | 33         |
| OPEC .....                            | 10         | 74         | 18         | 13         | 24         |
| ASEAN .....                           | 36         | 36         | 36         | 40         | 41         |
| CBERA .....                           | 53         | 53         | 72         | 72         | 63         |
| Eastern Europe .....                  | 1          | 0          | 1          | 1          | 11         |

<sup>1</sup> Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. U.S. trade with East Germany is included in "Germany" and not "Eastern Europe."

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

