Industry & Trade Summary

Live Cattle and Fresh, Chilled, or Frozen Beef and Veal

USITC Publication 2625 (AG-12)
April 1993

OFFICE OF INDUSTRIES
U.S. International Trade Commission
Washington, DC 20436

UNITED STATES INTERNATIONAL TRADE COMMISSION

COMMISSIONERS

Don E. Newquist, Chairman
Peter S. Watson, Vice Chairman
David B. Rohr
Anne E. Brunsdale
Carol T. Crawford
Janet A. Nuzum

Office of Operations
Robert A. Rogowsky, Director

Office of Industries
Vern Simpson, Director

This report was prepared principally by

David E. Ludwick

Animal and Forest Products Branch
Agriculture and Forest Products Division

Address all communications to
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.[1]

This report on live cattle and meat of cattle (beef and veal) covers the period 1987 through 1991 and represents one of approximately 250 to 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.

USITC publication number	*Publication date*	*Title*
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	Oilseeds
2511 (AG-5)	March 1992	Live Swine and Fresh, Chilled, or Frozen Pork
2520 (AG-6)	June 1992	Poultry
2544 (AG-7)	August 1992	Fresh or Frozen Fish
2545 (AG-8)	November 1992	Natural Sweeteners
2615 (AG-11)	March 1993	Citrus Fruit
2625 (AG-12)	April 1993	Live Cattle and Fresh, Chilled, or Frozen Beef and Veal

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

CONTENTS

CONTENTS—*Continued*

INTRODUCTION

This summary includes both live cattle and calves and fresh, chilled, or frozen meat (edible muscle) of cattle and calves that is fit for human consumption.[1] It gives information on the structure of the U.S. industry (including cattle growers, feedlot operators, and meat packers) and certain foreign industries, on domestic and foreign tariffs and nontariff measures, and on the competitiveness of U.S. producers in both domestic and foreign markets. The report generally covers the period 1987 through 1991.

Cattle (*Bos taurus* and *Bos indicus*) are ruminant animals that generally weigh from about 800 to 2,000 pounds at maturity, depending on breed and sex. In common usage, meat of cattle, which is red in color, is referred to as beef, and meat of immature cattle (calves), which is light pink in color, is referred to as veal. Calves are slaughtered at weights of about 350 pounds to produce veal. White fat covers much of the cattle carcass, and some fat, referred to as marbling, is dispersed throughout the meat. Fat imparts flavor to beef. U.S. consumption of fresh, chilled, or frozen beef and veal for table use or for processing is estimated by the Commission to have totaled 23.9 billion pounds in 1991. Consumption of beef and veal was equal to about 60 percent of U.S. consumption of red meat in 1991.[2] Of the consumption of beef and veal, about 98 percent is beef. In 1992, U.S. consumption of beef and veal totaled 24.1 billion pounds.

Transportation costs generally limit trade in live cattle to contiguous countries or areas. U.S. imports of live cattle, almost all from Canada and Mexico, amounted to about 1.9 million animals in 1991, equal to about 6 percent of U.S. slaughter in that year. About 60 percent of the imported animals weighed more than 90 kilograms (kg) (about 200 pounds) each, but less than 320 kg (about 700 pounds) each, and most are thought to have been feeder animals intended to be raised to slaughter weights in the United States. A few animals were for breeding purposes and dairy purposes. Industry sources indicate that nearly all of the remaining animals were imported for immediate slaughter. The Commission estimates that about 4 percent of the animals imported for slaughter in 1991 were veal calves. U.S. imports of live cattle amounted to about 2.3 million animals in 1992. Total fresh, chilled, or frozen beef imports, most of which came from Australia, New Zealand, and Central America, amounted to 1.6 billion pounds (product-weight) in 1991, and were equivalent to about 7 percent of U.S. consumption in that year. Such imports remained at 1.6 billion pounds in 1992.

Ruminant animals, such as cattle, are efficient at converting forages[3] to valuable products such as meat and milk. Most cattle therefore, are raised for the production of meat and milk. In some parts of the world, however, they are kept as draft animals or beasts of burden. Almost all cattle are slaughtered for meat when they are no longer useful for other purposes. In the United States about 90 percent of the cattle population consists of beef cattle, and nearly all of the remaining 10 percent consists of dairy animals.

Calves are born (calved) after a gestation period of 270-290 days. A few days after birth, most male calves are castrated, and are thereafter referred to as steers. Steers and heifers (female cattle that have not calved) are raised to a weight of about 400-700 pounds in about 10-14 months. Some heifers are retained to replace older cows or to build up inventories for breeding purposes. Steers are referred to as feeder animals (as are heifers that are not retained for breeding purposes), and the businesses that maintain herds of cattle to grow them to weights for "feeding" are referred to as cow-calf operations. These feeder cattle and calves may be sold to feedlot operators, who raise them to a slaughter weight of about 1100 pounds in a period of about 6 to 8 months more by confining them to pens and feeding them concentrated rations such as corn. At that point, these animals (which are now from about 18 to 22 months of age) are referred to as slaughter cattle or fed cattle. A few enterprises specialize in raising animals for breeding purposes. Many of the animals for breeding purposes are crosses of two or more breeds.

In the manufacturing process or slaughtering operation, live cattle and calves are inspected, stunned, bled, eviscerated, scalded, dehaired, and partially decapitated. The animal's carcass is then generally split along the spinal column and chilled; the carcass may be partially or fully processed at the meatpacking plant or shipped to retail outlets for processing. The carcass is cut up to yield steaks, ribs, and other parts. Other products, including tallow, offals, and hides are also derived from the slaughtering process, but are not covered by this summary.

Beef and veal that are ready for cooking and consumption without further processing are referred to as table beef and veal, and a significant portion (approximately two-thirds) of most beef and veal carcasses are so consumed. The other one-third is processed into such products as beef sausages and corned beef. The table beef and veal that are consumed in the United States are primarily sourced from domestically raised cattle and calves.[4] Imported beef is typically mixed with fat and trimmings derived from domestic cattle and used in prepared hamburgers, frozen dinners, stews, and soups.

---

[1] This summary does not include cattle offals or meat preparations such as beef sausages or canned beef.

[2] Red meat is defined as beef, veal, pork, lamb, and mutton.

[3] Forages are grass, hay, or other pasture that are consumed by animals. Forages require minimal processing such as bailing or cubing.

[4] Much of the meat of mature animals that are slaughtered after they are too old to be used for breeding purposes is used in the production of sausages and prepared or preserved beef.

U.S. INDUSTRY PROFILE

Industry Structure

The structure of the cattle industry in the United States is illustrated in figure 1. The Standard Industrial Classification (SIC) categories that pertain to the products in this summary are Beef Cattle Feedlots (0211), Beef Cattle, Except Feedlots (0212), Dairy Farms (0241), Meat Packing Plants (2011 in part), and Wholesale Meats and Meat Products (5147 in part).

Number of Firms and Concentration Among Firms

Growers

In 1991 the number of operations with cattle[5] in the United States totaled 1,246,470, down by 11 percent from 1987 (table B-1, appendix B). The number of operations with cattle fell further in 1992 totaling 1,232,370. Trade and industry sources report that a number of factors, including unsatisfactory levels of profitability, urban encroachment, and the U.S. Department of Agriculture (USDA) Dairy Termination Program, contributed to the decline. Most cow-calf operations, which account for the bulk of operations with cattle, are family owned and operated; thus the cow-calf sector is not generally described as highly concentrated. Many cow-calf herds, especially in the east, south, and midwest, are kept as part of diversified farming operations, whereas in the west, cattle frequently account for all, or nearly all, of many growers' income.

As with much of U.S. agriculture, there has been a long-term trend toward larger volume, capital-intensive businesses in the feedlot sector.[6] A few large food-processing firms are known to be involved in feedlots, either through direct ownership and operation, or through various types of contractual agreements.

Of the nearly 46,500 feedlots operating in 13 major cattle-feeding States in 1992, only 35 had a capacity[7] of 50,000 animals or more each. However, these feedlots accounted for 19 percent of fed cattle marketings in the 13 states in 1992. Conversely, about 45,000 of the feedlots had a capacity of fewer than 1,000 animals each and marketed only 13 percent of the total. The following tabulation shows the total number of cattle marketed by feedlot size for 1992 as reported by the National Agricultural Statistics Service (NASS) of the USDA[8]:

Feedlot capacity	Number of cattle marketed	Share
(Animals)	*(1,000 animals)*	*(Percent)*
Fewer than 1,000	2,807	13
1,000-49,999	15,101	68
50,000 or more	4,151	19
Total	22,059	100

Packers

The number of Federally inspected (FI)[9] cattle and calf-slaughtering plants in the United States declined during 1987-91 as shown in figure 2.

In 1991, some 18 plants slaughtered 0.5 million cattle or more, and accounted for 16.7 million animals, or 53 percent of the total FI slaughter. Concentration in the cattle-slaughtering sector appears to have increased slightly during 1987-91. In 1987, 19 plants which slaughtered 0.5 million animals or more accounted for 16.9 million cattle or 50 percent of total FI slaughter.

In 1991, 37 plants slaughtered 10,000 calves or more, and accounted for 1.6 million animals, or 89 percent of the total FI slaughter. In 1987, 56 plants that slaughtered 10,000 or more animals each accounted for 2.4 million calves or 91 percent of total FI slaughter.

Because many companies operate more than one slaughter plant, another measure of concentration in the cattle-slaughtering sector is the share of slaughter accounted for by the largest volume companies. That measure also shows that concentration in the cattle and calf-slaughtering sector appears to have increased as shown in figure 3.

Employment

Employment in the cattle-growing sector is difficult to measure because of several factors. Because cattle are commonly kept as components of diversified farming operations, cattle growing often constitutes only part-time employment. Also, many of the cattle-growing operations are family-run businesses; thus much of the labor is performed by family members at little or no out-of-pocket cost.

The USDA Economic Research Service (ERS) has estimated that an average cow-calf unit (a cow and her calf) requires 30.78 man-hours of labor annually.[10] Although the number of cow-calf units varies from year-to-year throughout the year, the Commission estimates that employment in the cow-calf sector was equivalent to about 650,000 man-years annually during 1987-91. The ERS has also estimated that an average of 0.91 man-hours of labor is required for each 100 pounds of weight gained by cattle in feedlots.[11] Based on the reported weight gained by cattle in feedlots and

[5] The U.S. Department of Agriculture (USDA) defines an operation with cattle as an operation having one or more animals on hand at any time during the year.

[6] This has not been the case in the cow—calf sector.

[7] Officials of the USDA report that feedlot operators are asked to define capacity as the maximum number of animals that would normally be kept in the feedlot (pens) at any one time. If the feedlot operator does not use pens, he is asked to define capacity as the number of animals he "normally" feeds.

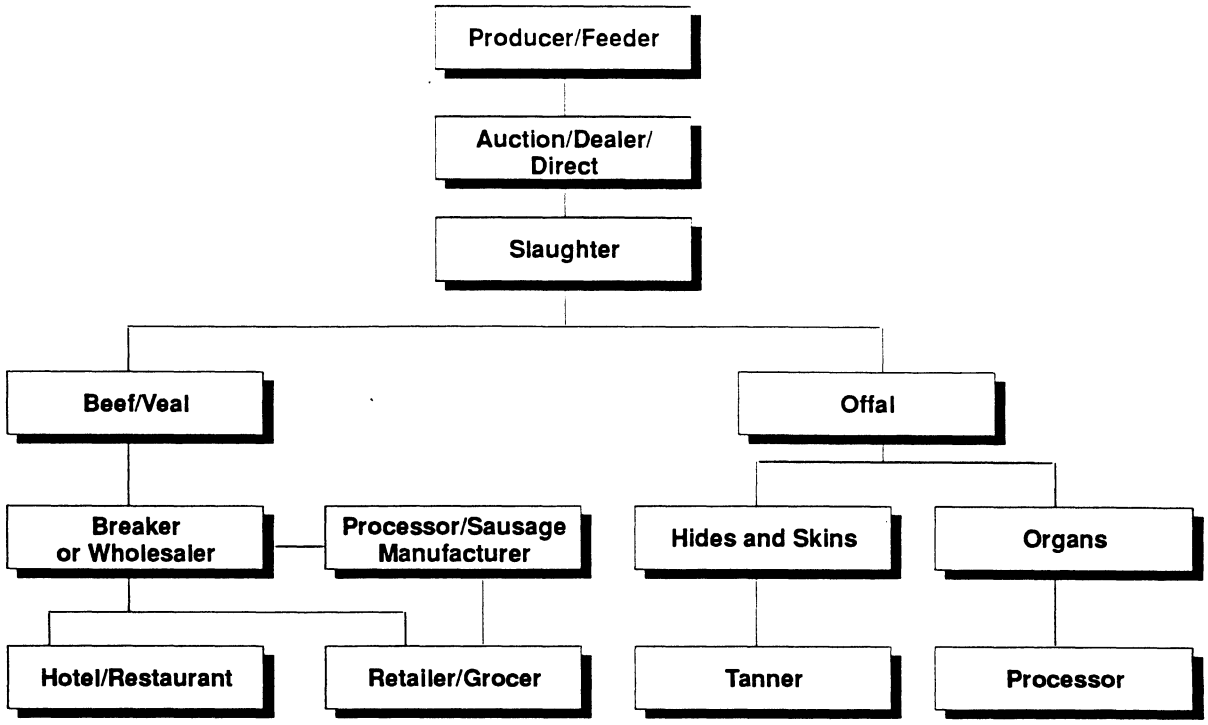
[8] USDA, NASS, *Cattle on Feed,* Feb. 19, 1993, pp. 4—9.

[9] During 1987—91, FI cattle—slaughtering plants annually accounted for 95 percent or more of commercial cattle slaughter.

[10] USDA, ERS, *Costs of Production—Livestock and Dairy, 1989* (Report Number ECIFS—9—1), Aug. 1990, p. 37.

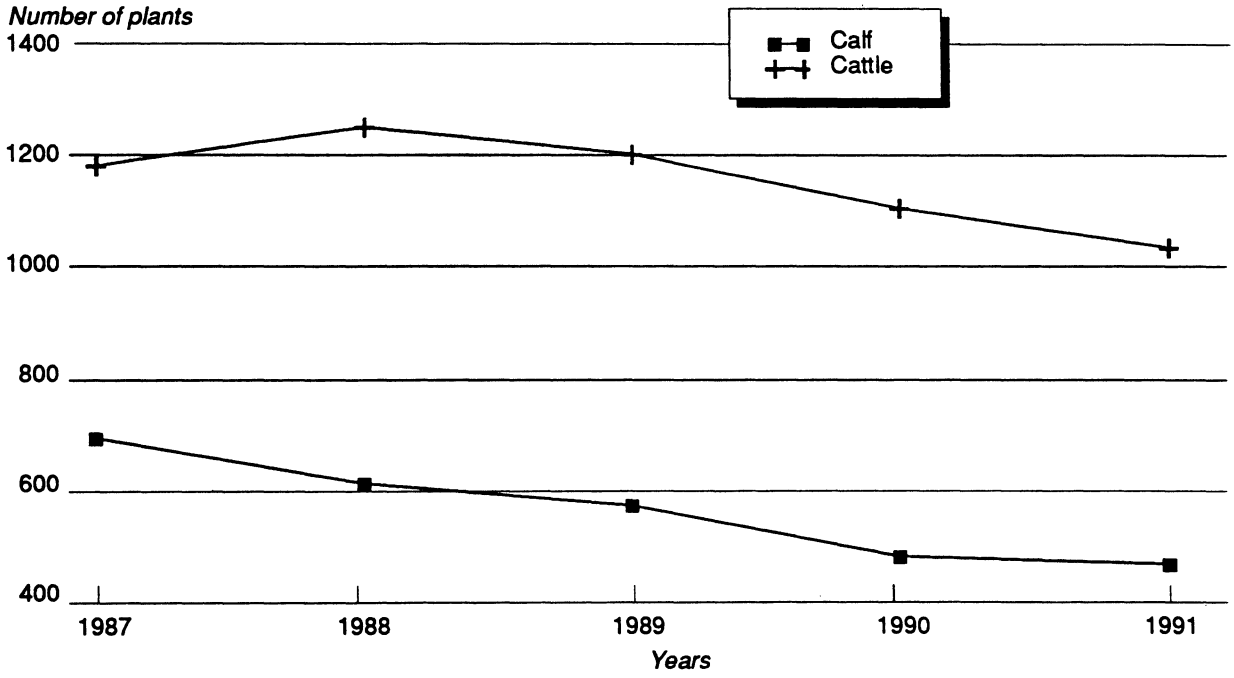
[11] Ibid., p. 34.

Figure 1
Cattle and meat of cattle: Structure of the U.S. Industry



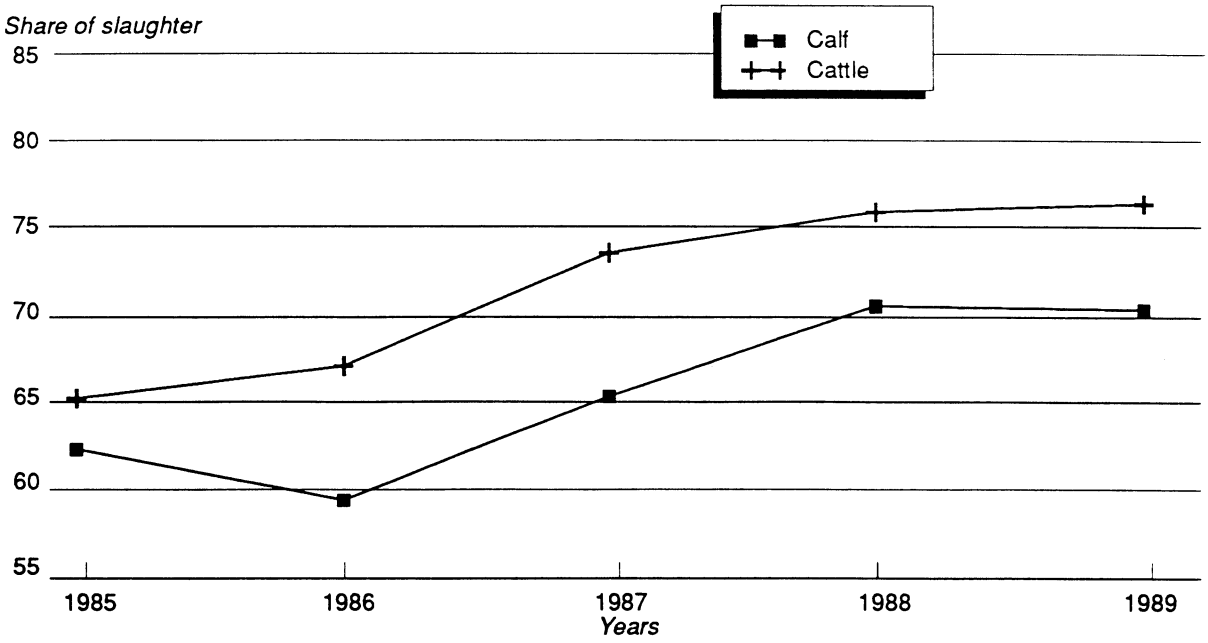
Source: Prepared by the staff of the U.S. International Trade Commission.

Figure 2
Cattle and calf-slaughtering plants: Number, 1987-91



Source: USDA NASS, "Livestock Slaughter Summary," annual issues, 1988-92.

Figure 3
Largest 20 cattle and calf-slaughtering plants: Share of slaughter, 1985-89



Source: American Meat Institute, "Meat Facts 1990," Aug. 1991, p. 28.

man-hour requirements, the Commission estimates that employment in the feedlot sector was equivalent to about 65,000 man-years annually during 1987-91.

Employment in the cattle and calf-slaughtering sector amounted to about 60,000 people annually during 1987-91.[12] Trade and industry sources report that, generally, increases or decreases in overtime worked, rather than large changes in the number of employees, accommodate fluctuations in production in the slaughtering sector.

Geographic Distribution

Although cattle are raised and beef is processed throughout the United States, production is concentrated in the Western Rangelands,[13] the Corn Belt,[14] and the Southeastern States.[15]

[12] Based on the total number of employees in the meatpacking industry, as reported by the U.S. Department of Commerce and the share of meat production accounted for by beef and veal.

[13] The Western Rangelands include the States of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

[14] The Corn Belt consists of the States of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin.

[15] The Southeastern States are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

In 1991, 409,000 cattle operations were located in the Corn Belt States, representing 33 percent of the U.S. total of 1.2 million. On January 1, 1992, the inventory or census of cattle in the Corn Belt States was 33.3 million animals, representing 33 percent of the U.S. inventory of 100.1 million animals (table B-2). Also in 1991, about 87 percent of the feedlots were located in the Corn Belt States of Illinois, Iowa, Kansas, Minnesota, and Nebraska (table B-3). These Corn Belt feedlots marketed a total of 16.7 million cattle in 1991, 51 percent of the total in that year. The Corn Belt is a highly productive agricultural area, well suited to the growing of grasses and legumes (for grazing and hay production) and grains (principally corn) to grow cattle to slaughter weights. Because the Corn Belt is a surplus grain-growing region, feeder calves are typically shipped in from the Western Rangelands and the Southeastern States for feeding.

In 1991, the Western Rangeland States accounted for 376,400 cattle operations or 30 percent of the U.S. total. These operations accounted for 44.1 million animals, representing 44 percent of the U.S. cattle inventory as of January 1, 1992. In 1991, the Western Rangeland States accounted for 12 percent of the feedlots and marketed a total of 10.8 million cattle (33 percent of the total). The States in the Western Rangelands region have large areas with limited rainfall and/or rough topography that restrict the growing of row crops. However, this region does have large areas well suited to grazing. Because cattle are hardy animals that can easily adapt to this environment, the region has historically been a major cattle-raising area.

The Southeastern States have been another major cattle-growing region. In 1991, this region had 366,000 cattle operations, or 29 percent of the U.S. total. These States accounted for 17.4 million animals, or about 17 percent of the U.S. cattle population as of January 1, 1992. The Southeastern States have some of the same advantages as the Corn Belt. However, the soils are generally not as fertile as those in the Corn Belt. Feedlots are not concentrated in the Southeastern States; cow-calf operations predominate instead. When the calves are ready to be placed on feed, they are shipped to Corn Belt States or the Western Rangelands.

A number of factors, including transportation efficiencies, environmental regulations, and packinghouse worker wage rates, have contributed to the long-term trend for cattle to be processed near where they are fed to slaughter weights. Consequently, cattle are generally slaughtered in the regions where they are fed and where packing plants are concentrated (table B-4).

Labor Intensity; Level of Automation

Cost of production studies by the USDA ERS suggest that cow-calf operations are much more labor-intensive than are feedlot operations. The estimated cost of labor, total economic costs, and share of total economic costs accounted for by labor, per cow, for cow-calf operations during 1987-89 are shown in table B-5.[16] The costs to grow fed cattle are shown in table B-6. The data reported by ERS for cow-calf operations indicate that the total cost per cow accounted for by labor increased in dollar amounts, and averaged about 20 percent of total economic costs over 1987-89. However, the labor share of the total cost to grow feeder cattle (while increasing slightly in dollar terms) accounted for only about 2 percent of total economic costs over the same period.

Industry and government sources report that, in general, there has been a long-term trend toward increased automation in the feedlot sector. This trend has been less pronounced in the cow-calf sector.

Beef-slaughtering and beef-processing operations tend to be highly automated and are not especially labor-intensive. In 1987 and 1989, the American Meat Institute (AMI), a trade association representing meatpackers, collected statistics on labor costs among meatpackers. The AMI reported production labor costs was 5.21 percent of total beef-slaughtering costs in 1987 and 4.42 percent in 1989.[17]

Labor Skill Levels, Productivity, and Wage Rates

Cattle growing and beef processing generally require good management skills and an attentive labor force. Disease must be controlled to prevent death loss among cattle, especially among young calves. Death losses of cattle can be high because of disease or, in the case of young calves, because of predators. Cattle kept in feedlots must receive special care because they are dependent on the manager for feed and water. Meat processing at the plant level involves health and sanitary practices and skills associated with handling perishable foods.

ERS cost-of-production studies also show that productivity, as measured by the man-hours required to produce 100 pounds of beef in cattle feedlots and the man-hours required to maintain a cow and her calf, did not change significantly during 1985-89. Although the amount of time required to produce 100 pounds of beef in cattle feedlots declined slightly, the labor cost increased from 87 cents per 100 pounds in 1985 to 94 cents per 100 pounds in 1989, or by 8 percent. The labor cost to maintain a cow and her calf also increased from $92.25 per year in 1985 to $107.92 in 1989.[18]

Average hourly earnings for meatpacking workers as reported by the U.S. Department of Labor, which generally reflect agreements negotiated between unions and management, are shown in figure 4.

Vertical Integration

Many cattle farmers, especially in the Corn Belt States and Southeastern States, have vertically integrated operations. That is, they typically grow all or most of the grain, usually corn, consumed by their animals. Also, they typically grow crops, usually soybeans, from which protein supplements are derived, although these crops are seldom processed on their farms.

Some packers also feed cattle for slaughter. The number of packer-fed slaughter animals, and their share in total cattle marketings for 1987-90 are shown in the following tabulation:[19]

Year	Packer-fed slaughter	Packer-fed slaughter as a share of marketings
	(1,000 animals)	*(Percent)*
1987	1,145	4.4
1988	967	3.6
1989	1,102	4.2
1990	1,257	4.9

Trade and industry sources report that some cattle are raised under various types of contractual agreements with packers and others with feed companies. Some beef packers, such as Con Agra, Inc. and IBP, Inc. are diversified in that they process other species, such as swine, poultry, and lamb. Trade and industry sources report that there is a limited amount of integration with foreign suppliers, producers, and assemblers.

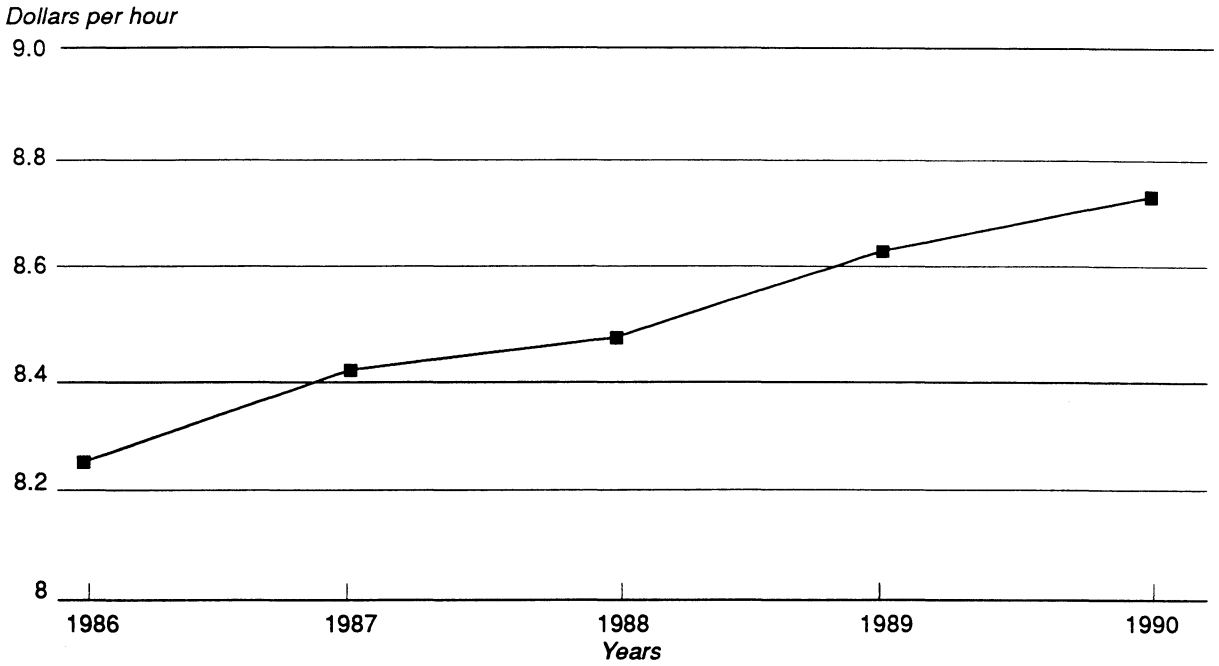
[16] Industry sources estimate that the share of cost accounted for by labor in 1990 and 1991 was not significantly different from the share in 1989.

[17] American Meat Institute, *Meatfacts 1991*, and *Meatfacts 1989*.

[18] Labor cost increases were irregular during 1987—89 primarily as a result of irregular increases in wage rates during the period.

[19] *Packers and Stockyards' Administration Statistical Report 1989 and 1990*, No. 91—1, p. 32 and No. 92—1, p. 28.

Figure 4
Wage rates: Average hourly earnings for U.S. meatpacking workers, 1986-90



Source: U.S. Department of Labor.

Marketing Methods and Pricing Practices

The marketing of cattle may be viewed as beginning with animals for breeding purposes that are raised by various types of growers and then sold to growers who breed these animals and raise cattle for slaughter. A large share of cattle sales by growers of breeding animals consists of male animals because many growers obtain their female animals for breeding purposes by selecting and retaining the most desirable female calves they raise. Bulls, especially dairy bulls, are sometimes kept by stud farms, and their semen is collected for artificial insemination. Some growers specialize in raising purebred animals for breeding purposes while others specialize in raising animals that are not purebred, but are still kept for breeding purposes. Animals for breeding purposes are generally sold at auction or through private agreements.

Feeder cattle are generally sold at auction through dealers who contact farmers, or by private agreements. Many feeder-animal transactions are private agreements between individuals who have had long-term business relationships. In addition, many cattle are raised from birth to slaughter weights by one enterprise. These animals are then sold for slaughter (1) at auctions, (2) at terminal markets where buyers for packers are congregated, (3) to buyers or dealers who contact farmers on behalf of packers, or (4) directly to packers. In recent years, sales of cattle at auctions and at terminal markets (public markets) combined have accounted for about 18 to 20 percent of total sales. Cattle sales to buyers or dealers, and to packers have accounted for about 80 percent of total cattle sales.

There has been a trend in recent years for cattle growers to receive payment on the basis of the quality of the carcass derived from the live animal, with a premium being paid for preferred carcasses and penalties being charged for undesirable ones. Individual meatpacking companies typically develop their own standards for such quality-grading systems.[20] The meatpackers contend that payments based on carcass quality increase their profitability, as well as that of the growers, by making the price system more efficient. The share of cattle purchased on a grade and weight basis during 1986-90 (the most recent years for which data are available) as reported by the USDA are shown in figure 5.

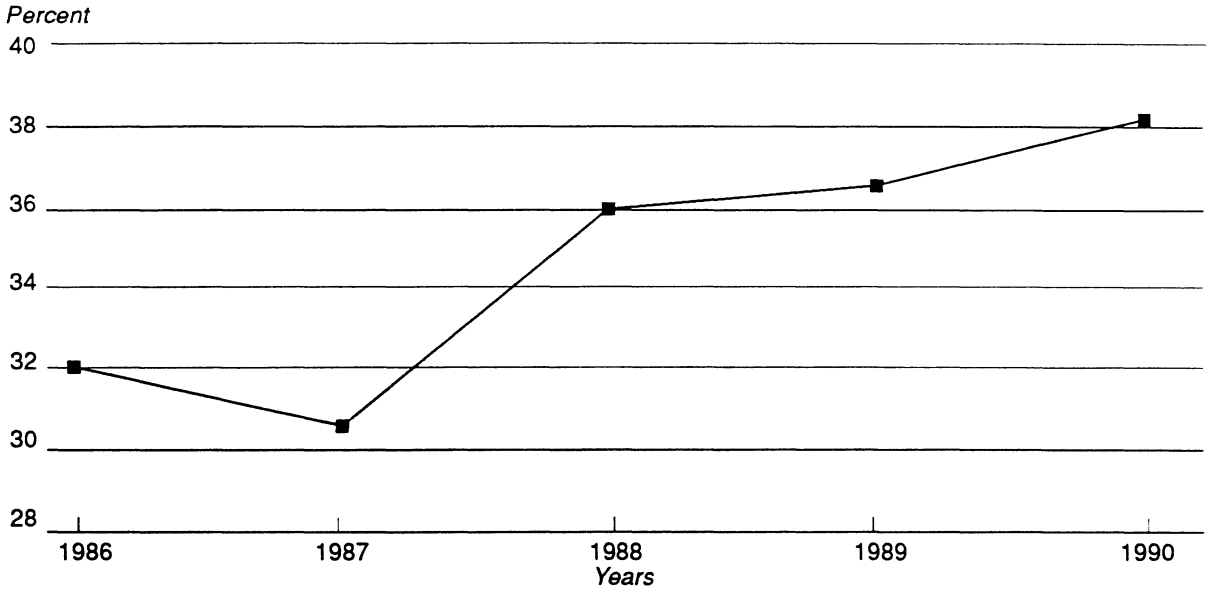
Market prices for live cattle and meat are reported by Federal, State, and, in rural areas, local government authorities, by agricultural and packer associations, and by private businesses. Many market prices are negotiated on the basis of reference prices reported daily in commercial publications. Frequently, meat prices are derived according to a formula that is based on a commercial publication such as the National Provisioner's *Yellow Sheet*[21] or the *Meat Sheet*.[22] For

[20] Some slaughterers sell beef to processors, but others are integrated enterprises that further process the beef for sale to wholesalers, retailers, or food service enterprises.

[21] The National Provisioner is a private price—reporting service, and the *Yellow Sheet* is one of its publications.

[22] The *Meat Sheet* is the publication of another private price—reporting company.

Figure 5
Cattle: Share purchased on a grade and weight basis, 1986-90



Source: "Packers and Stockyards' Administration Statistical Report 1990 Reporting Year" (P&SA Statistical Report Number 92-1, p. 24).

example, the packer and the wholesaler may agree on a price premium that is the same as or different from the *Yellow Sheet* price. The price differential may reflect location, quality factors, or both.

Research and Development Expenditures

The Cooperative State Research Service (CSRS) of the USDA collects data on public research expenditures for cattle and beef. This funding includes expenditures from all sources (Federal, State, and private), and it is used to support research in such areas as genetics, nutrition, reproduction, animal health, marketing, and promotion. CSRS reports that public research expenditures for cattle and beef increased steadily, from $137.9 million in 1986 to $168.6 million in 1990.[23] Also, officials of the CSRS report that there is significant research and development for cattle and beef in the private sector, but that companies are reluctant to discuss such information for commercial and public relations reasons.

Other Research Affecting the U.S. Industry

Both public and private research in the live cattle sector has included studies of biotechnology and genetic engineering.[24] There has been much interest in cloning of cattle, (i.e., the production of several genetically identical calves) through the division of one embryo, and in bovine somatotropin (bST), or cattle growth hormone. As of March 1993, the Food and Drug Administration had not approved the commercial use of bST in the United States.[25]

Consumer Characteristics and Factors Affecting Demand

Beef and veal are consumed throughout the United States, and most Americans consume at least some beef. Beef, pork, and poultry are the most commonly consumed meats in the United States. The demand for beef and veal is influenced by such factors as the price of other meats (e.g., pork and poultry), consumer income, and consumer attitudes. In general and depending on the cut, beef prices per pound are higher than those of chicken and pork. The consumption of beef is affected by seasonal demands, for example, increased demand for beef for summer cook-outs. Also, the demand for beef is affected by seasonal alternatives, for example consumption of hams and turkey at holiday seasons. Industry sources maintain that health perceptions among some consumers, especially perceptions about cholesterol, may have reduced the demand for beef. Industry has responded by producing leaner beef through genetics and adjustments in animal feeding at the farm level and by removing fat at the processing level.

[23] Reported by Larry R. Miller, principal animal scientist, USDA, CSRS, in a telephone conservation with USITC staff, Mar. 19, 1992.

[24] Biotechnology and genetic engineering are discussed in the USITC staff report, *An Overview of Commercial Biotechnology in the United States,* Staff Research Study 17, Nov. 1991.

[25] Bovine somatotropin is discussed in the USITC summary *Dairy Produce* (AG—3), USITC publication 2477, Apr., 1992.

FOREIGN INDUSTRY PROFILE

Cattle are raised throughout most parts of the world. They are thought to have been among the first domesticated animals, and they are able to adapt to a variety of conditions. Production facilities range from confined, factory-like feedlots where they receive close monitoring and carefully prepared feed, to open rangelands where they receive minimal assistance. The United States is the largest beef and veal-producing country in the world, followed by the European Community (EC), the former Soviet Union, Brazil, Argentina, and the Central and East European Countries (CEE) (table B-7). The EC, Australia, New Zealand, and the United States, have been the major fresh, chilled, or frozen beef exporters (table B-8).

European Community

The EC was the world's second-leading producer of beef and veal during 1987-91. Table B-7 shows that production declined by 7 percent, from 18.7 billion pounds in 1987 to 17.3 billion pounds in 1989, but increased by 10 percent, to 19.0 billion pounds, from 1989 to 1991. During 1987-91, the EC was the leading world exporter of beef and veal. EC exports of beef and veal (excluding EC intra-trade) rose from 2.0 billion pounds in 1987-88 (11 percent of production) to 2.7 billion pounds in 1989 (15 percent of production), but declined to 2.3 billion pounds in 1990-91 (13 percent of production). Exports were equivalent to 11 percent of production in 1987-88, 15 percent in 1989 and 13 percent in 1990-91.

A large share of beef and veal production is derived from cattle kept for the production of milk, or from dual purpose cattle—i.e., those kept for both meat and milk production. Cattle growers in the EC benefit from the Common Agricultural Program (CAP). The CAP, among other things, provides a support or floor price for milk and beef; this price is maintained, if necessary, by CAP purchases and disposition of dairy products and beef. Also, the CAP effectively limits import competition through a system of variable levies and minimum import prices. Exporters of EC dairy products and beef benefit from CAP export restitution payments that encourage exports. Restitution payments may vary depending on world market prices, the country being exported to, and the cut being sold.

Besides the CAP, many other factors affect the competitiveness of the EC beef and veal sector compared with that of the United States. For example, both the EC and the United States have extensive research and development programs, generally highly advanced production technology, and well-developed transport infrastructure. The Corn Belt of the United States has a climate conducive to growing corn and soybeans, whereas a large part of the EC does not.

Thus, U.S. cattle growers generally have better access to feed (the largest cost in raising feeder cattle to slaughter weights) at lower prices than their EC counterparts. It is generally accepted that producers in the United States do not receive benefits comparable to the CAP.

The Former Soviet Union

The former Soviet Union was the third-largest beef and veal producer in the world during 1987-91. USDA reports that beef production in the former Soviet Union increased steadily from 18.3 billion pounds in 1987 to 19.4 billion pounds in 1989 and 1990, but declined to 18.0 billion pounds in 1991. Exports of beef and veal from the former Soviet Union are negligible in relation to production because supplies there are used for the domestic market. Exports from the former Soviet Union declined from 15 million pounds annually in 1987 and 1988 to 11 million pounds annually during 1989-90, and they were negligible or nil in 1991. Whereas beef and veal production in the former Soviet Union grew irregularly by 6 percent during 1987-90 before declining by 7 percent in 1991, that of the United States declined irregularly by 4 percent during 1987-90 before increasing by 0.6 percent during 1991.

In the former Soviet Union, cattle are grown on large-volume state farms and cooperatives. However, a small volume are kept on small plots by individuals with frequently one or two cows. Trade and industry sources report that production efficiency in the cattle-growing sector could be increased by adding protein supplements to the feed the animals receive. These inputs could be obtained from the world market or from domestically grown crops. However, because of its northern location, much of the former Soviet Union has a growing season that is too short and a climate too cold for optimal agricultural production. In fact, in recent years, it has been a net importer of grain, and cattle growing must compete with other high-priority alternative uses for limited supplies of grain. Consequently, cattle growers are generally at a disadvantage compared with their counterparts in the United States and the EC in terms of feed inputs.

Brazil

USDA reports that Brazil was the fourth-largest beef and veal producer during 1987-91. Although production declined irregularly from 8.8 billion pounds in 1987 to 7.9 billion pounds in 1990, or by 10 percent, it increased to 8.2 billion pounds in 1991. A large share of Brazil's production is derived from Zebu, or humped-backed cattle. Although Brazil exports a significant quantity of beef and veal, most is thought to consist of cooked and canned beef and canned corned beef rather than fresh, chilled, or frozen meat. Health and sanitary regulations in major importing countries, particularly regulations related to foot-and-mouth disease and rinderpest,[26] generally prohibit imports of fresh, chilled, and frozen meat from Brazil and other

[26] Rinderpest and foot—and—mouth diseases are highly contagious, infectious diseases that can afflict cloven—footed animals (such as cattle, sheep, swine, and deer). Because the diseases are easily transmitted and debilitating, they are an ever—present threat to the U.S. livestock industry. The diseases do not present a direct threat to human health.

countries not certified as free of such diseases. The reason is that such diseases remain contagious to live cattle through beef in fresh, chilled, or frozen form. Also, Brazil has developed good markets for its canned products. Some of Brazil's exported beef is in retail-sized containers, but much is in large containers and is manufacturing-type beef derived from grass-fed animals. Brazil is competitive in the production of grass-fed beef, but generally not competitive in the production of grain-fed beef. Brazil's cattle and meat sector benefits from low wage rates for labor, including packing house workers.

Argentina

Argentina was the world's fifth-largest beef and veal producer during 1987-91. USDA reports that beef and veal production in Argentina declined from 6 billion pounds in 1987 to 5.7 billion pounds in 1989, but recovered to 5.8 billion pounds in 1990 and 1991. Like Brazil, Argentina exports a significant quantity of beef and veal. However, most is thought to consist of cooked and canned beef and canned corned beef, including manufacturing beef,[27] rather than fresh, chilled, or frozen meat, in part because of health and sanitary regulations in the recipient countries. Argentina benefits from having large and highly productive grazing areas and relatively moderate land costs, although much of Argentina's beef-processing sector reportedly is in need of modernization.

Central and East European Countries

The CEE countries were also major beef and veal producers during 1987-91. USDA reports that production in the CEE declined irregularly from 4.6 billion pounds in 1987, to 4.3 billion pounds in 1991, or by 7 percent. The CEE countries exported between 8 to 15 percent of their beef and veal production during 1987-91. A large share of the exports have consisted of prepared or preserved products rather than fresh, chilled, or frozen. Health and sanitary regulations in major meat-importing countries generally restrict CEE exports of fresh, chilled, and frozen meat. However, the CEE countries have successfully developed many markets for their prepared and preserved products and sausages.

Historically, cattle were grown on large-volume state farms and cooperatives in the CEE countries, and depending upon the country, small numbers were kept by individuals on small private plots. However, as a result of recent political developments in various CEE countries, there has been a trend toward agricultural privatization, including the cattle and beef sectors.

Advantages enjoyed by the CEE countries result from a long history of livestock and meat production and exports, indicating they have an experienced labor and management force. Many CEE meat exports, especially sausages, have a reputation for high-quality, strong consumer preferences, and brand loyalties. However, CEE production efficiencies (as in the former Soviet Union) could be improved by adding protein supplements to animal feeds. In addition, sanitary regulations, especially those applicable to fresh, chilled, or frozen meat, in importing countries, and perceived environmental problems, such as contamination by heavy metals in the CEE, may have a negative effect on exports.

[27] Manufacturing beef generally refers to beef that is used in the production of prepared or processed foods.

U.S. TRADE MEASURES

Tariff Measures

Table B-9 shows the general and special column 1 rates of duty applicable to U.S. imports of live cattle and fresh, chilled, or frozen beef, for 1992, and U.S. exports and U.S. imports of the articles for 1991. The aggregate trade-weighted average rate of duty for all products included in this summary (dutiable and duty-free) amounted to about 1 percent in 1991. Appendix A contains an explanation of tariff and trade-agreement terms.

Harmonized Tariff Schedule of the United States (HTS) subheading 9903.23.00 provides for a 100-percent ad valorem duty on imports of beef, without bone (except offal) fresh, chilled, or frozen (provided for in subheading 0201.30.60 or 0202.30.60) from the EC under authority of Presidential Proclamation 5759. The Presidential proclamation resulted after the EC instituted regulations concerning imports of meat from countries where the use of certain growth stimulants (hormones) is authorized. The EC actions are further described in the section of this report entitled U.S. Government Trade-Related Investigations.

The provisions for live cattle in the HTS include some categories based on weight. One HTS subheading (0102.90.4020) provides for certain cattle weighing less than 90 kilograms each. U.S. Customs officials report that most of the imports in this category consist of veal calves imported for immediate slaughter. Another HTS subheading (0102.90.4030) provides for cattle weighing 90 kilograms or more each but less than 200 kilograms each. Imports in this category reportedly include veal calves imported for immediate slaughter and feeder animals. Another HTS subheading (0102.90.4050) provides for cattle weighing 200 kilograms or more each but less than 320 kilograms each. Imports in this category reportedly consist mostly of feeder animals. Two other HTS subheadings (0102.90.4082 and 0102.90.4084) provide for cattle weighing 320 kilograms or more each. Imports in these categories also reportedly consist mostly of feeder animals, although they are near appropriate slaughter weights when imported and are likely to remain in feedlots for only a relatively short time.

Nontariff Measures

U.S. imports of live cattle are not subject to quotas, embargoes, or safeguard actions. However, both live cattle and fresh, chilled, or frozen beef and veal are

subject to health and sanitary regulations. In addition, fresh, chilled, or frozen beef and veal may be subject to quotas under the Meat Import Act of 1979[28] and voluntary restraint agreements (VRAs) negotiated under section 204 of the Agricultural Act of 1956.[29]

Health and Sanitary Regulations

Certain health and sanitary regulations with respect to U.S. imports of live cattle, as well as fresh, chilled, or frozen beef and veal, are administered by the USDA to protect the U.S. livestock industry and ensure an adequate supply of safe meat for consumers. For example, sources of imports of the aforementioned articles are generally limited to those from countries that have been declared free of rinderpest and foot-and-mouth diseases by the U.S. Secretary of Agriculture.[30] The general effect of such prohibitions has been to allow imports only from North America, Australia, New Zealand, and certain areas of Europe.

The USDA administers section 20 of the Federal Meat Inspection Act,[31] which provides, among other things, that meat and meat products prepared or produced in foreign countries may not be imported into the United States "unless they comply with all the inspection, building construction standards, and all other provisions of this chapter [ch. 12, Meat Inspection] and regulations issued thereunder applicable to such articles in commerce in the United States." Section 20 further provides that "all such imported articles shall, upon entry into the United States, be deemed and treated as domestic articles subject to the provisions of this chapter [ch. 12, Meat Inspection] and the Federal Food, Drug, and Cosmetic Act [12 U.S.C. 301]. . . ." Thus, section 20 requires that foreign meat-exporting countries enforce inspection and other requirements with respect to the preparation of the products covered that are at least equal to those applicable to the preparation of like products at Federally inspected establishments in the United States. It also requires that the imported products be subject to inspection and other requirements upon arrival in the United States to identify them and further ensure their freedom from adulteration and misbranding at the time of entry.[32] However, section 20 does not provide that the imported products be inspected by U.S. inspectors during their preparation in the foreign country.

The U.S. Secretary of Agriculture has assigned responsibility for the administration of the Department's section 20 functions to the Foreign Programs Division, Meat and Poultry Inspection Program, Food Safety and Inspection Service (FSIS). By the end of 1990 (the most recent year for which data are available), the FSIS had certified 29 countries as having meat inspection systems with standards at least equal to those of the U.S. program and had certified 1,370 foreign plants, including 637 in Canada, 134 in Australia, 89 in New Zealand, 20 in Central America, and 6 in Mexico.[33] However, some of these plants ship only pork or lamb to the United States. The FSIS has veterinarians stationed outside the United States. Plants exporting large volumes and other plants of special concern are visited at least once a year.

Pursuant to the Agriculture and Food Act of 1981,[34] the FSIS has placed increasing emphasis on review of a country's regulatory system as a whole, rather than on review of individual plants. FSIS now evaluates country controls in seven basic risk areas: residues, diseases, misuse of food additives, gross contamination, microscopic contamination, economic fraud, and product integrity.[35] As required by the Farm Bill, FSIS also vigorously carries on a species identification program under which the FSIS assures that meat is properly identified by origin and species.

Under the Federal Meat Inspection Act, all imported meat being offered for entry into the United States must be accompanied by a meat inspection certificate issued by a responsible official of the exporting country. The certificate must identify the product by origin, destination, shipping marks, and amounts. It must certify that the meat comes from animals that received veterinary antemortem and postmortem inspections; that it is wholesome, not adulterated or misbranded; and that it is otherwise in compliance with U.S. requirements. Imported meat is also subject to the same labeling requirements as domestically processed meats, i.e., the label must be informative, truthful, and not misleading.

Under the Federal Meat Inspection Act, U.S. inspectors at the port of entry inspect part of each shipment of meat. Representative sampling plans similar to those used in inspecting domestic meat are applied to each import shipment. Samples of frozen products are defrosted, canned meat containers are opened, and labels are verified for prior U.S. approval and stated weight accuracy. Specimens are routinely submitted to meat inspection laboratories to check compliance with compositional standards. Sample cans are also subjected to periods of incubation for signs of spoilage. Meat imports are also monitored for residues, such as pesticides, hormones, heavy metals, and antibiotics, by selecting representative samples for laboratory analysis. Special control measures are in effect for handling meat from countries when excessive

---

[28] 19 U.S.C. 1202 note.

[29] 7 U.S.C. 1854.

[30] Pursuant to sec. 306 of the Tariff Act of 1930 (19 U.S.C. 1306).

[31] 21 U.S.C. 620.

[32] See U.S. Senate, Agriculture and Forestry Committee, Report on S. 2147, S. Rep. No. 799 (90th Cong. 2d sess.) 1967, as published in 2 *U.S. Code Congressional and Administrative News,* 1967, p. 2,200. S. 2147, as modified, ultimately became Public Law 90—201 (the Wholesome Meat Act), approved Dec. 15, 1967.

[33] The number of certifications refer to all meat, including beef and veal. See USDA, *Meat and Poultry Inspection, 1990, Report of the Secretary of Agriculture to the U.S. Congress,* Mar. 1, 1991, p. 39 (hereinafter, USDA, *Meat and Poultry Inspection, 1990*).

[34] Sec. 1122 of Public Law 97—98, dated Dec. 22, 1981.

[35] USDA, *Meat and Poultry Inspection,* 1984, p. 50.

amounts of residues are detected. These measures include refusing or withholding entry of the product from countries with a history of problems until results of laboratory analysis are received.

During 1990, 7.7 million pounds of fresh, chilled, or frozen beef and veal constituting roughly 0.5 percent of the fresh, chilled, or frozen beef and veal offered for entry to the United States, was condemned or refused entry.[36] Canada accounted for 55 percent of this meat; Australia accounted for 23 percent; New Zealand accounted for 9 percent; Central American countries, Mexico, and Sweden accounted for the remainder.

Meat Import Act of 1979

By virtue of certain conditions set forth in the Meat Import Act of 1979,[37] which amended the Meat Import Act of 1964,[38] fresh, chilled, or frozen beef and veal, provided for in HTS subheadings 0201.10.00, 0201.20.20, 0201.20.40, 0201.20.60, 0201.30.20, 0201.30.40, 0201.30.60, 0202.10.00, 0202.20.20, 0202.20.40, 0202.20.60, 0202.30.20, 0202.30.40, and 0202.30.60 is subject to an absolute quota by Presidential proclamation; however, quotas have been imposed only once—late in 1976. Also, meat of cattle is subject to VRAs negotiated with major exporting countries under section 204 of the Agricultural Act of 1956. In addition to beef and veal, the quotas and VRAs cover U.S. imports of fresh, chilled, or frozen meat of sheep and goats. Imports of beef and veal account for virtually all such imports.

VRA actions during 1987-92 are shown in the following tabulation:[39]

Year	Country	VRA Level
		(Million pounds)
1987.....	Australia	722.0
	New Zealand	438.0
1988.....	Australia	811.6
	New Zealand	451.4
1989.....	No VRAs	
1990.....	No VRAs	
1991.....	Australia	743.0
	New Zealand	445.0
1992.....	Australia	736.8
	New Zealand	446.8

[36] USDA, *Meat and Poultry Inspection, 1990,* p. 45.

[37] Public Law 96—177, approved Dec. 31, 1979 (19 U.S.C. 1202).

[38] Public Law 88—482, approved Aug. 22, 1964 (19 U.S.C. 1202).

[39] For a history of VRA actions and actions under the Meat Import Acts, see USITC, *Estimated Tariff Equivalents of U.S. Quotas on Agricultural Imports and Analysis of Competitive Conditions in U.S. and Foreign Markets for Sugar, Meat, Peanuts, Cotton, and Dairy Products,* investigation No. 332—281, USITC publication. 2276, April 1990.

U.S. Government Trade-Related Investigations

In July 1987, the Commission completed a factfinding investigation conducted under section 332(g) of the Tariff Act of 1930[40] for the purpose of investigating the competitive position of Canadian live cattle and beef in U.S. markets. The investigation was instituted pursuant to a request from the U.S. Senate Committee on Finance.

In May 1988, the Office of the United States Trade Representative (USTR) initiated an investigation under section 301 of the Trade Act of 1974 concerning import restrictions on beef from the Republic of Korea (Korea). In May 1989, a General Agreement on Tariffs and Trade (GATT) panel determined that Korea had no GATT justification for the restrictions. Subsequently, Korea agreed to eliminate the restrictions on beef before July 1997, or within 7-1/2 years.[41]

Effective November 1, 1990, the EC prohibited imports of most meat (including beef, veal, and offals) from the United States, contending that U.S. plants where the meat and offals were being processed did not meet EC sanitary requirements. On November 28, 1990, the National Pork Producers Council (NPPC) and the AMI filed a petition requesting the USTR "to use its authority under Section 301 of the 1974 Trade Act to retaliate on the EC's ban on U.S. pork." The associations contended that the EC action is an unfair trade barrier that cannot be supported by scientific standards or concerns about food safety. On January 10, 1991, the USTR accepted the industry petition to review the EC action against U.S. meat exported to the EC.[42]

On November 13, 1992, the USTR announced that the United States and the EC signed an agreement ending the dispute over inspection procedures for U.S. meats exported to the EC.[43] The USTR reported that the agreement is based on the findings of a joint veterinary group. The agreement adopts the group's findings on all points and establishes a schedule for completing action on the pending issues. In addition, the agreement sets out interim requirements for determining the eligibility of U.S. cattle and hog slaughtering facilities to supply products to the EC. The USTR also reported that anticipating the completion of this agreement, the section 301 meat investigation was concluded on October 9, 1992.

In January 1993, the Commission completed a factfinding investigation conducted under section 332(g) of the Tariff Act of 1930 on the U.S. and

[40] See USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets,* investigation No. 332—241, USITC publication 1996, July 1987.

[41] USDA, Foreign Agricultural Service (FAS), *World Livestock Situation* (FL&P 4—91), Nov. 1991, p. 10.

[42] The USTR received comments from 41 U.S Senators and 30 Congressmen urging acceptance of the industry petition.

[43] USTR, press release, *U.S. EC Resolve 3RD Country Meat Directive Dispute,* 1992.

Canadian live cattle and beef sectors, including industry profiles, trade, and factors of competition.[44]

Also, in January 1993, the Commission completed an investigation[45] under section 332(g) of the Tariff Act of 1930 for the purpose of analyzing the short- and long-term costs and benefits of the North American Free-Trade Agreement (NAFTA) for the U.S. economy, focusing on selected industries (including livestock and meat). This study reported that NAFTA will likely result in little or no effect on the U.S. cattle and beef sectors.

FOREIGN TRADE MEASURES

Tariff Measures

Mexican imports of cattle from the United States are free of duty as are imports of fresh, chilled, or frozen beef and veal.[46] Canadian imports of live cattle from the United States became duty free on January 1, 1993.[47] Canadian imports of fresh, chilled, or frozen carcasses and other cuts of beef and veal with bone in, and fresh or chilled boneless beef and veal from the United States are duty free. Imports of frozen boneless beef and veal are dutiable at CAN¢2.2 (US¢1.8) per kilogram if from the United States.[48] Japanese imports of fresh, chilled, or frozen beef and veal are dutiable at 60 percent ad valorem effective April 1, 1992. This rate of duty reflects an agreement negotiated with the Japanese Government. The agreement, among other things, provided for elimination of Japanese quotas on imports of beef and veal and imposition of an ad valorem rate of duty that would be reduced through phased reductions.[49] Korean imports of fresh, chilled, or frozen beef and veal from the United States are dutiable at 20 percent ad valorem.[50]

Nontariff Measures

Most countries have strict health and sanitary regulations, pertaining to the importation of live cattle, beef, and veal. Some of which are similar to U.S. regulations.

Canada, citing the presence of bluetongue disease in the United States, imposes restrictions on U.S. imports of live cattle when such animals are not intended for immediate slaughter. The effect of the regulations has been to limit imports of live cattle from the United States to certain times of the year.[51]

Korean imports of U.S. beef and veal are subject to quotas under the U.S-Korea Beef Agreement of April 1990. Under that agreement, the Koreans agreed to a gradual increase in the quantities of beef and veal that could be imported under quota. Korea's initial minimum quota for 1991 of 86,000 metric tons (carcass basis), but was subsequently increased to 160,000 metric tons. The initial minimum quota for 1992 is 94,000 metric tons, but USDA officials anticipate that the level will also be increased. Korean increases in the annual quota quantities reportedly reflect the Korean Government's desire to control beef price inflation.[52]

U.S. MARKET

Consumption

Live Cattle

U.S. slaughter (consumption) of cattle and calves is shown in figure 6 and table B-10. Slaughter declined steadily from 38.8 million animals in 1987 to 34.4 million in 1991, or by 11 percent. Slaughter declined to 34.2 million animals in 1992. Cattle and calf slaughter ultimately reflects the demand for beef and veal, although the supply response is lagged by biological constraints associated with the time required to breed animals and grow calves to appropriate slaughter weights. The decline in slaughter from 1987 to 1991 reflected, in part, the decision of growers to retain animals for breeding purposes, rather than to sell them for slaughter. Both the total cattle inventory and the number of cows kept for breeding purposes have increased since January 1, 1989.

The import-penetration level for live cattle and calves increased from 3.1 percent in 1987 to 6.1 percent in 1990, but declined to 5.6 percent in 1991. Imported cattle from Mexico are reported to be closely comparable in price and quality to cattle raised in the Southwestern United States, while those imported from Canada are reported to be closely comparable in price and quality to cattle raised in the northern parts of the United States.

Fresh, Chilled, or Frozen Beef and Veal

U.S. consumption of beef and veal is shown in figure 7 and table B-11. Consumption declined from 25.0 billion pounds in 1987 to 23.9 billion pounds 1990 and 1991. Consumption rose slightly to 24.1 billion pounds in 1992. U.S. per capita consumption of

---

[44] See USITC, *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition,* investigation No. 332—328, USITC publication 2591, January 1993.

[45] See USITC, *Potential Impact on the U.S. Economy and Selected Industries of the North American Free—Trade Agreement,* investigation No. 332—337, USITC publication 2596, January 1993.

[46] USDA, FAS, *Mexican Import Tariff for Agricultural Commodities, Part I;* MX1011, Jan. 30, 1991, p. 5 and pp. 7—8.

[47] Presidential Proclamation 6343 (56F.R. 50003) of October 2, 1991, implemented an accelerated schedule of duty eliminations under the United States—Canada Free—Trade Agreement and made such eliminations effective retroactively to July 1, 1991.

[48] Canadian Tariff Schedules as of January 1, 1993.

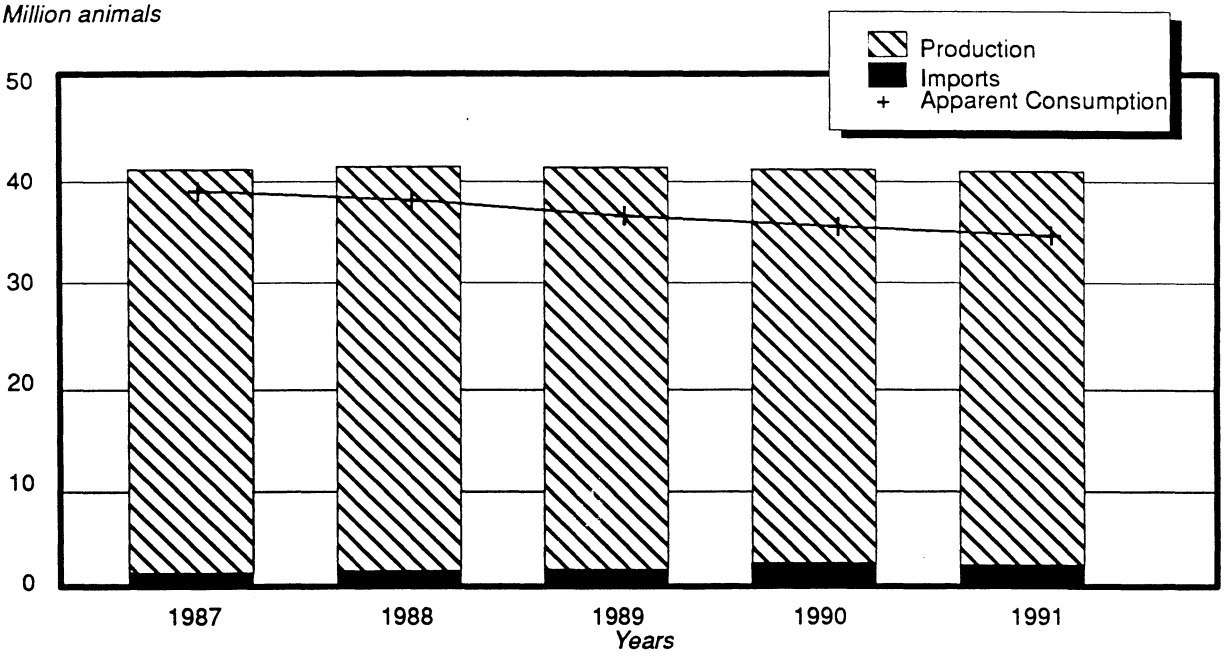
[49] For an description of Japanese tariff and nontariff measures see USITC, *Estimated Tariff Equivalents,* USITC publication. 2276, Apr. 1990.

[50] USDA official, telephone conversation with USITC staff, Washington DC, Mar. 26, 1991.

[51] For a discussion of the Canadian bluetongue disease restrictions, see USITC, *The Competitive Position of Canadian Live Cattle and Beef,* USITC publication 1996, July 1987.

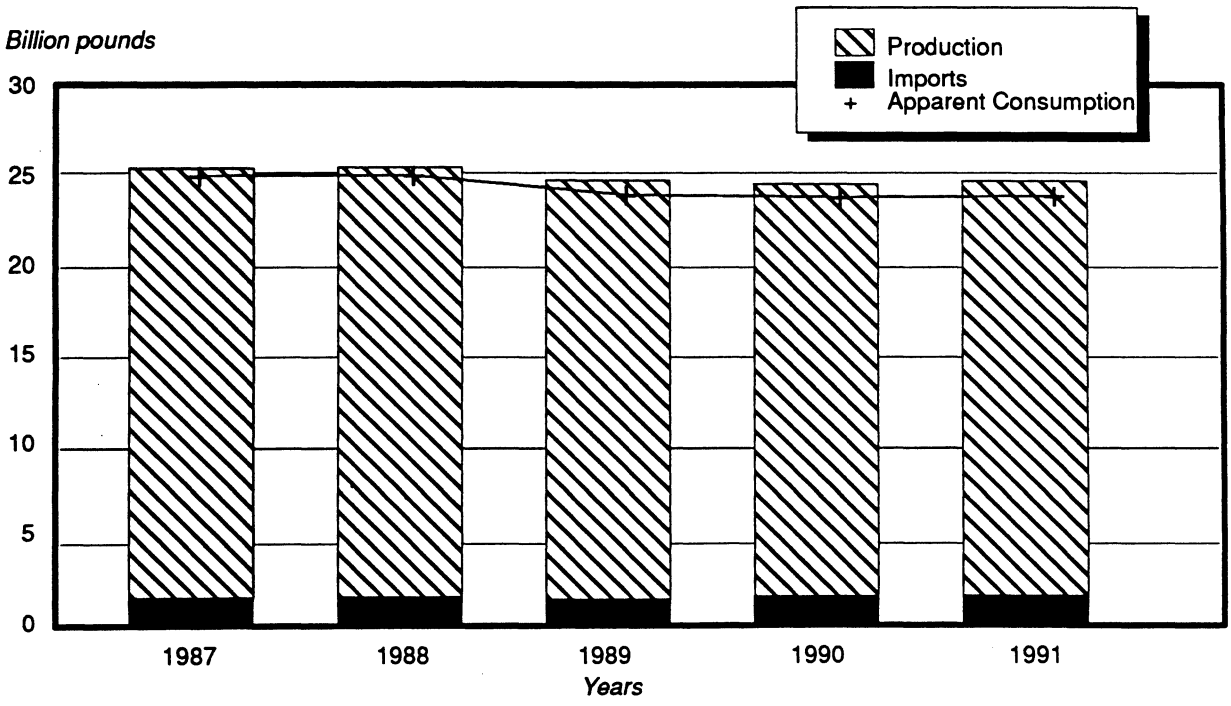
[52] USDA, FAS, *World Livestock Situation,* pp. 10—11.

Figure 6
Live cattle and calves: U.S. imports, domestic production, and apparent consumption, 1987-91



Source: Production for 1990-91 compiled from USDA ERS Livestock and Poultry Situation and Outlook Report (LPS-51) Jan. 1992, p. 32; 1989 from Livestock and Poultry Situation and Outlook Report (LPS-48) July 1991, p. 28; 1987-88 from Livestock and Poultry Situation and Outlook Report (LPS-39).

Figure 7
Beef and veal-fresh, chilled, or frozen: U.S. imports, domestic production, and apparent consumption, 1987-91



Source: Production for 1990-91 compiled from USDA ERS Livestock and Poultry Situation and Outlook Report (LPS-51) Jan. 1992, p. 32; 1989 from Livestock and Poultry Situation and Outlook Report (LPS-48) July 1991, p. 28; 1987-88 from Livestock and Poultry Situation and Outlook Report (LPS-39).

beef similarly declined from 103.5 pounds in 1987 to 95.4 pounds in 1991, while per capita consumption of poultry increased from 78.5 pounds to 94.9 pounds (table B-12). The import-penetration level averaged about 6 percent annually during 1987-91. Imported beef and veal consisted mostly of frozen meat for manufacturing, while the bulk of domestic production is marketed as fresh. However, the imports are reported to be closely comparable in price and quality to some domestic products.

Production

Live Cattle

U.S. cattle production, or the number of animals born during the year (referred to as the calf crop), declined from 40.2 million animals in 1987 to 39.2 million in 1990, but increased slightly to 39.3 million in 1991 (table B-10). The 1992 calf crop remained constant at 39.3 million animals. The calf crop primarily reflects the number of animals kept for breeding purposes, but it is modified by the calving rate (the share of cows that produce calves during the year).

Fresh, chilled, or frozen beef and veal

Beef and veal production in the United States declined from 24.0 billion pounds in 1987 to 23.0 billion pounds in 1990, but increased to 23.2 billion pounds in 1991. Such production increased to 23.4 billion pounds in 1992. As noted earlier, there was a steady decline in the number of cattle and calves slaughtered between 1987 and 1991. In addition to the number of animals slaughtered, beef production reflects average slaughter weights. The average dressed weight of cattle slaughtered under Federal inspection during 1987-91 is shown in figure 8.

Inventories of fresh or chilled beef and veal do not build up to any significant extent because of the relatively short shelf life of the product. Most fresh or chilled beef and veal is consumed within 3 weeks of slaughter of the animal. Freezing can extend the shelf life of beef and veal; however, U.S. inventories seldom exceed 750 million pounds, or about 3 percent of annual production. Consumers prefer fresh over frozen meat. Freezing lowers the value of meat, raises the cost and thus is avoided, if possible.

Imports

Live Cattle

The great bulk of imports of live cattle from Mexico consist of feeder steers destined to be raised to slaughter weights in U.S. feedlots. The Mexican export market for steers consists of three different stock categories. The first category consists of calves derived from European breeds of cattle. The second category consists of calves derived from crosses of European and Zebu breeds; these animals have short and thick bodies but lack the prominent hump. The third category consists of animals derived wholly or mostly from Zebu breeds; these animal have a prominent hump, long ears, and short hair.[53]

Imports of live cattle from Canada include cull cattle, fed steers and heifers, and young calves destined for slaughter; feeder cattle and calves to be placed in U.S. feedlots; and dairy and beef animals for breeding purposes as well as dairy animals for milk production. During 1990 and 1991, steers and heifers for immediate slaughter accounted for about 36 percent of total imports, cull cattle accounted for about 30 percent, and feeders for much of the remainder.[54]

U.S. imports of live cattle from all sources increased from 1.2 million animals in 1987 to a peak of 2.1 million in 1990 before declining to 1.9 million in 1991 (table B-13). Such imports increased to 2.3 million animals in 1992. Imports from Mexico increased from 874,000 animals in 1989, to 1.3 million in 1990, but declined to 1.0 million in 1991. In general, Mexican exports of cattle to the United States have been significantly influenced by rainfall in Northern Mexico and resulting pasture conditions. Drought in 1989 and 1990 contributed to relatively high export levels in those years. In addition, in the late 1980s Mexico replaced its quota on exports of live cattle with an export charge that declines annually and will be eliminated by 1993. Mexican exports were reduced in 1991 as rainfall increased, pastures improved, and Mexican cattlemen retained animals to build up their herds.

Imports from Canada increased from 585,000 animals in 1988 to 905,000 in 1991. As a result of changes in Canadian Government transportation policies, there has been a trend for cattle from the Canadian Prairie Provinces, especially Alberta, to move south to the United States, rather than east to Ontario.

About 40 percent of U.S. imports of live cattle and calves from Canada in 1989 and 1990, and 46 percent in 1991, entered under reduced rates of duty under the United States-Canada Free-Trade Agreement. U.S. importers of live cattle include feedlot operators, farmers, ranchers, and U.S. meatpackers.

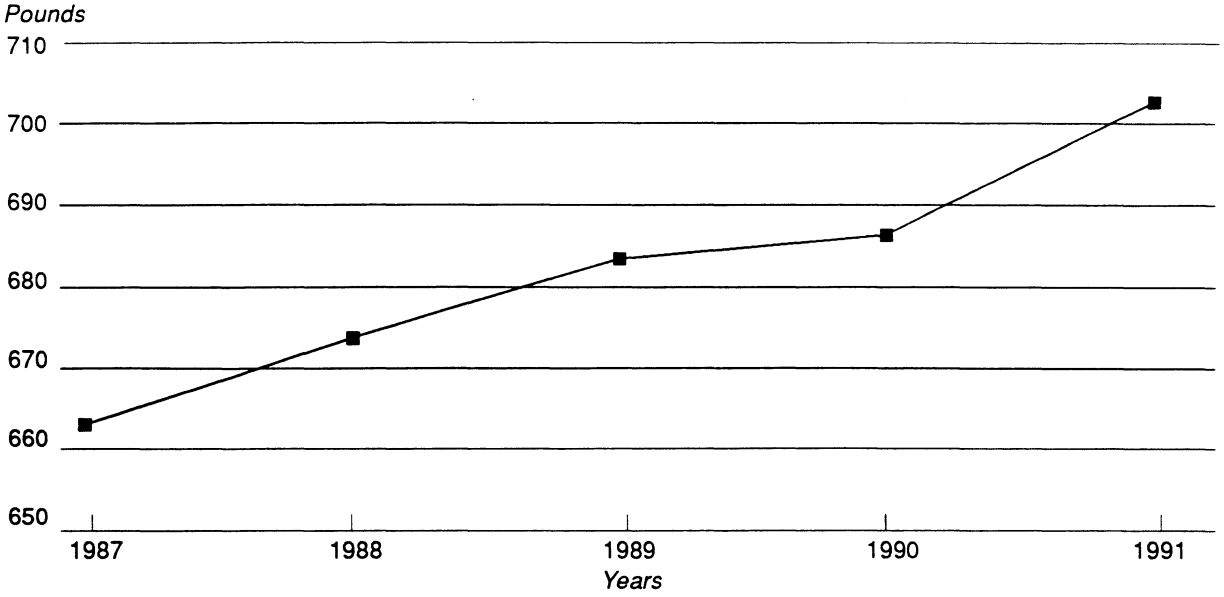
Fresh, Chilled, or Frozen Beef and Veal

The bulk of U.S. imports of fresh, chilled, or frozen beef and veal consists of frozen boneless beef used in manufacturing food products such as frozen dinners. Most of this imported beef is derived from grass-fed animals; that is somewhat different in characteristics and uses from beef derived from grain-fed cattle, much of which is used for table beef. Grain-fed beef is typically marbled with fat, is more tender, and has more flavor than grass-fed beef. Trade and industry sources report that the imported beef is closer in characteristics and uses to beef derived from domestic cull cows and bulls. Imported beef typically

[53] Adapted from USDA, FAS, *Livestock Annual* (MX0144), Aug. 6, 1990, pp. 3—4.

[54] Agriculture Canada, *Canada Livestock and Meat Trade Report*, vol. 72, No. 52—1, Jan. 4, 1992, p. 19.

Figure 8
Slaughter cattle: Average dressed weight under Federal inspection, 1987-91



Source: USDA, NASS "Livestock Slaughter Summary" annual issues, 1988-92 (P&SA Statistical Report Number 91-1, p. 32).

is about 85 percent lean, and it is often mixed with higher fat content trimmings from domestic grain-fed animals to obtain a product with a specifically desired fat content. The imported frozen meat can be mixed with the domestic fresh meat to produce a properly chilled product.

U.S. imports of fresh, chilled, or frozen beef and veal averaged 1.5 billion pounds annually during 1987-91, ranging from a low of 1.4 billion pounds in 1989 to a high of 1.6 billion pounds in 1991 (table B-14). In 1992, such imports remained relatively unchanged from 1991, totaling 1.6 billion pounds. The imports from Canada, which accounted for about 11 percent of the total annually during 1989-91, entered duty free, or at reduced rates under the United States-Canada Free-Trade Agreement. Imports from CBERA countries, about 5 percent of annual total imports, entered duty free.

Australia accounted for about 50 percent of total U.S. imports of fresh, chilled, or frozen beef annually in 1990 and 1991, up from 44 percent in 1989. Imports from New Zealand accounted for about 30 percent of U.S. imports in 1990 and 1991, down from 35 percent in 1989. In general, the quantity of imports from Australia and New Zealand are significantly influenced by rainfall and resulting pasture conditions. In periods of drought, pastures are inadequate and cattle herds may be reduced by increasing slaughtering rates, thereby resulting in higher beef production and exports. When rainfall increases, animals may be kept from slaughter to build up herds, resulting in reduced beef production and exports in the short run.

Small quantities of fresh, chilled, or frozen beef and veal are also imported from Europe, i.e., Denmark, Ireland, and Sweden. U.S. importers of fresh, chilled, or frozen beef and veal include wholesalers and brokers, some of whom are subsidiary companies of domestic and foreign meat processors.

FOREIGN MARKETS

Live Cattle

The major foreign markets for U.S.-produced live cattle are Canada and Mexico. However, U.S. exports of live cattle to Canada have been restricted by Canadian regulations concerning bluetongue. There has traditionally been some limited international trade in high-value animals for breeding purposes. However, industry sources indicate that with improved technological advances, genetic improvements will increasingly depend upon trade in semen and embryos, which are generally less difficult and expensive to transport and safer in terms of animal disease transmission.

Beef and Veal

Japan and the EC were major world markets for beef and veal during 1987-91 (table B-15).[55] During

[55] Trade data relating to fresh, chilled, or frozen beef and veal on an international basis are difficult to compare in part because of conflicting distinctions that countries use in classifying imports as fresh, chilled, or frozen; prepared or preserved; or meat preparations. The export statistics shown in the table include all beef and veal, but the countries in the table are thought to include the major importers of fresh, chilled, or frozen beef and veal.

1991, exports to Japan exceeded 1 billion pounds. Exports to the EC exceeded 1 billion pounds annually during 1988-90, but declined to 955 million pounds in 1991. Exports to the former Soviet Union rose from 313 million pounds in 1987 to 573 million pounds in 1991. World exports to Canada increased from 298 million pounds in 1987 to 441 million in 1991, and those to the Republic of Korea increased dramatically—from 0 in 1987 to 353 million pounds in 1991.

U.S. exports of meat to world markets face competition from (1) the EC, where the industry benefits from export restitution payments and the CAP; (2) Canada, where growers benefit from a variety of government programs that stabilize their returns; (3) Australia, which is recognized as benefiting from having vast and relatively low-cost grazing areas, and a well developed meat-processing sector; and (4) New Zealand, which is similarly recognized as having nearly ideal grazing conditions and a well-developed meat processing sector. In part because of its large and efficient grain-growing sector, the United States tends to be competitive in the production of meat derived from grain-fed cattle.

Japan has been the largest U.S. export market for beef and veal. Statistics reported by the USDA show that the price for U.S. beef in the Japanese market is generally lower than the price of Japanese beef, but higher than Australian beef.[56] Trade and industry sources report that well-marbled (grain-fed) beef is preferred in the Japanese market and that the U.S. beef is generally considered high-quality. Much of the beef imported into Japan from Australia is reported to be derived from grass-fed cattle. The U.S. share of the Japanese import market for beef and veal was 43 percent in 1990 and 44 percent in 1991; Australia's was 52 percent in 1990 and 51 percent in 1991.[57] The United States has two clear advantages in supplying the Japanese market: (1) the ability to supply Japan's demand for grain-fed product, and (2) the ability to supply the specific cuts preferred by Japanese consumers, especially loin cuts.[58] In trade publications, there have been a number of reports of Japanese interests investing in cattle and beef enterprises in the United States, Australia, and New Zealand. Japanese ownership, or partial ownership of businesses, is thought to be a significant advantage as it assures sales in the Japanese market. Japanese tariff rates provide an advantage to Japanese growers and processors.

Canada has been the second-largest U.S. export market for beef and veal. In 1990 the United States supplied 47 percent of Canada's imports of beef and veal.[59] The Canadian and U.S. beef markets are highly interrelated. According to the Canadian Meat Institute, a trade association representing Canadian meatpackers—

> It is a dictum in the Canadian livestock and meat business that the U.S. puts both a floor and a ceiling on Canadian prices. It has been a fact of life that Canadian prices can rise only to the point where (exchange, duty and transportation considered) U.S. product rolls in, in sufficient quantity to stop the price rise or even reduce it slightly. Similarly, if Canadian prices decline, they will only drop to the point where (exchange, duty and transportation considered) movement will commence to the U.S.[60]

Overall, U.S. and Canadian beef and veal are of similar quality. According to the USDA, there is a continued demand in Canada for high-quality boxed beef[61] from the United States. U.S. beef continues to be well-positioned to compete in the high consumption area of central Canada. Factors affecting this competition include the shift in Canadian beef production and packing operations to Western Canada,[62] and the Canadian imposition of countervailing duties on imports of beef from the EC, which has benefitted U.S. exports.

The United States accounted for 30 percent of the quantity and 42 percent of the value of Korean imports of beef in 1991.[63] The Republic of Korea has also emerged as an important market, albeit declining in relative terms for U.S. exports of beef. The price for U.S. beef in the Korean market is frequently higher than the price of Australian beef, but sometimes lower than Canadian beef.[64] The United States exports almost exclusively so-called high-quality (grain-fed) beef to Korea, whereas Australia and New Zealand export both high-quality and so-called regular beef. As with Japan, Korean tariff rates provide an advantage to Korean growers and processors, but Korea has not been reported to have discriminated against any particular foreign supplier.

The United States has been largely excluded from the EC market by the CAP, the third-country meat directives, and the EC regulations concerning growth stimulants (hormones). Also, the EC has given certain concessions to CEE countries, contributing to EC imports from that region.

The EC and CEE countries benefit from their closeness to the former Soviet Union market and consequent lower transportation costs. The CEE countries are not among the top beef and veal-exporting countries of the world but have traditionally exported beef and veal to the former Soviet Union. Most of the meat imports into the former

---

[56] USDA, FAS, *Livestock Semi—Annual Report* (JA2005), Jan. 31, 1992, p. 10—12.

[57] Ibid, p. 13.

[58] USDA, FAS, *World Livestock Situation*, p. 8.

[59] Ibid., pp. 13—14.

[60] *Conditions of Competition Between the U.S. and Canadian Live Swine and Pork Industries*, prehearing brief of Canadian Meat Council, p. 2, regarding USITC, investigation No. 332—186.

[61] Boxed beef consists primarily of beef cuts sealed in plastic containers and shipped in paperboard boxes.

[62] In addition, Canadian cattle growers benefit from a variety of government programs that stabilize their returns, including the Tripartite Stabilization Program.

[63] Ibid, pp. 4, 6, and 10.

[64] USDA, FAS, *Livestock Beef Import Data—Korea* (KS2001), Jan. 9, 1992, pp. 1—11.

Soviet Union are directly linked with some type of foreign assistance. The former Soviet Union does continue to purchase some mutton from New Zealand and Australia, but for the most part it has been receiving much of its imports in the form of donations from EC countries, particularly Germany. The likelihood of U.S. exporters making headway into the markets of the former Soviet Union would be considered slim at the present time, given its over-extended credit situation and deteriorating domestic economy.[65]

U.S. EXPORTS

Live Cattle

Most U.S. exports of live cattle and calves are destined for Mexico or Canada. U.S. exports of live cattle and calves to Mexico during 1987-91 consisted mostly of animals destined for immediate slaughter, but there were some exports of animals for breeding purposes. U.S. exports to Canada consisted primarily of feeders and animals destined for immediate slaughter, with some exports of animals for breeding purposes.[66] Almost all U.S. exports of live cattle and calves to countries except Canada and Mexico consisted of high-value animals for breeding purposes and/or dairy cattle. U.S. exports of live cattle and calves to all markets were equal to less than 1 percent of the quantity of U.S. production annually during 1987-91.

Total U.S. exports of live cattle and calves increased irregularly from 131,000 animals, valued at $105 million, in 1987 to 311,000 animals, valued at $187 million, in 1991 (table B-16). Such exports increased to 322,000 animals, valued at $193 million in 1992. Exports to Mexico increased irregularly from 125,000 animals, valued at $72 million, in 1989 (74 percent of the total quantity and 67 percent of the value) to 210,000 animals, valued at $133 million, in 1991 (67 percent of the total quantity and 71 percent of the value). Mexican packers benefit from both lower wage rates and from the strong Mexican market for offals and hides. Some Mexican cattlemen are reported to be importing U.S. cattle for breeding purposes in order to expand herd size and improve genetics. These Mexican cattlemen are reported to be planning to export additional quantities of feeder animals to the United States, and are thus adapting their animal genetics to the U.S. market. U.S. exports of live animals and, in some years, meat to Mexico have benefitted from U.S. Government export promotion programs.[67]

Exports to Canada increased from 23,000 animals, valued at $10 million, in 1989 (14 percent of the total quantity exported to all countries but 9 percent of the value) to 88,000 animals, valued at $36 million, in 1991 (28 percent of the total quantity but 19 percent of the value). According to the USDA, favorable livestock prices contributed to an increase in U.S. exports to Canada.[68] Live cattle and calf exporters include individual cattlemen in the United States as well as cattle traders.

Fresh, Chilled, or Frozen Beef and Veal

A large share of U.S. exports of fresh, chilled, or frozen beef and veal consists of prime cuts derived from grain-fed steers and heifers. Also, Japan and the Republic of Korea import significant quantities of high-quality boxed beef. Exports increased from the equivalent of 1.8 percent of the quantity of U.S. production in 1987 to 3.8 percent in 1991.

Total U.S. exports of fresh, chilled, or frozen beef and veal increased irregularly from 441 million pounds, valued at $729 million, in 1987 to 872 million pounds, valued at $1.7 billion, in 1991 (table B-17). In 1992, such exports increased to 962 million pounds, valued at $2.0 billion. Japan has been by far the largest U.S. export market for fresh, chilled, or frozen beef and veal. Canada, Mexico, and Korea are small, but are rapidly growing U.S. export markets for beef and veal. Total U.S. exports of fresh, chilled, or frozen beef and veal to Japan declined from 596 million pounds, valued at $1.0 billion, in 1989 (71 percent of the total quantity of U.S. exports of fresh, chilled, or frozen beef and veal and 72 percent of the value), to 386 million pounds, valued at $879 million in 1991 (44 percent of the total quantity and 51 percent of the value). The decline in U.S. exports reflects increased Japanese imports of competitively priced beef from Australia and, according to Japanese interests, unusually high inventories of beef in Japan.

Exports to Canada increased from 69 million pounds, valued at $119 million, in 1989 (8 percent of the total quantity and 9 percent of the value) to 189 million pounds, valued at $365 million, (22 percent of the total quantity and 21 percent of the value) in 1991, and reflected the continued demand in Canada for high-quality boxed beef from the United States. Exports to Mexico increased from 65 million pounds, valued at $76 million, in 1989 (8 percent of the total quantity, but 5 percent of the value) to 140 million pounds, valued at $184 million (16 percent of the total quantity but 11 percent of the value) in 1991. A strong economic growth rate and a gradual recovery of consumer purchasing power has been expanding demand for U.S. beef in Mexico. Also, the Mexican Government reportedly has encouraged imports of meat to help ameliorate rising meat prices. Mexico tends to import lower priced cuts and a higher share of carcasses for processing, largely reflecting the lower purchasing power of many Mexican purchasers and the lower wage rate for meat cutters in Mexico.

Exports to Korea increased from 47 million pounds, valued at $79 million, in 1989 (6 percent of the total quantity and value) to 108 million pounds,

---

[65] USDA, FAS, *Livestock* (AGR No. UR1064), Aug. 1, 1991, p. 12.

[66] Agriculture Canada, *Canada Livestock and Meat Trade Report*, vol. 72, No. 52—1, Jan. 4, 1992, p. 19.

[67] USDA, FAS, *Livestock Semi Annual—Narrative* (MX2008), Jan. 31. 1992.

[68] USDA, FAS, *World Livestock Situation*, p. 7.

valued at $177 million (12 percent of the total quantity and 10 percent of the value) in 1991. The increase in exports reflects, in part, changes in the Korean Government import policies and rising consumer demand for beef in Korea. Also, the Korean Government reportedly has encouraged imports of meat to help ameliorate rising meat prices. U.S. exporters of beef and veal to all markets include the major U.S. meatpackers.

U.S. Trade Balance

Tables B-18 and B-19 show the U.S. trade balances for live cattle and calves, and beef and veal, respectively. The United States has been by far a net importer of live cattle and calves, registering a trade deficit that increased from $316 million in 1987 to $890 million in 1990; in 1991 it amounted to $765 million. This deficit primarily reflects the rise in imports from both Canada and Mexico. The United States was a net importer of beef and veal during 1987-90, but the deficit shrank irregularly from $604 million in 1987 to $114 million in 1990. The United States was a net exporter of beef and veal in 1991 with a trade surplus of $63 million. The shift in the trade balance for beef and veal primarily reflected increased U.S. exports to Canada, Korea, and other countries.

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 upon 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 Armenia, Bulgaria, the People's Republic of China, Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Moldova, Mongolia, Poland, Russia, the Ukraine and Yugoslavia are currently 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. Where eligibility for special tariff treatment is not claimed or established, goods are dutiable at column 1-general rates.

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, and reduced-duty treatment to certain other articles, which are the product of and imported directly from designated countries, as set forth in general note 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 (IFTA), as provided in general note 3(c)(vi) of the HTS. Where 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 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*** (CFTA), as provided in general note 3(c)(vii) to the HTS.

Preferential nonreciprocal duty-free or reduced-duty treatment in the special subcolumn of column 1 followed by the symbol "J" or "J*" in parentheses is afforded to eligible articles the product of designated beneficiary countries under the ***Andean Trade Preference Act*** (ATPA), enacted in title II of Public Law 102-182 and implemented by Presidential Proclamation 6455 of July 2, 1992 (effective July 22, 1992), as set forth in general note 3(c)(ix) 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*** (APTA) (general note 3(c)(iii))

and the ***Agreement on Trade in Civil Aircraft*** (ATCA) (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, antidumping 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 establish quantitative limits on imports of textiles and apparel, of cotton and other vegetable fibers, wool, man-made 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
Number of U.S. operations with cattle by regions, 1987-91

Region	1987	1988	1989	1990	1991
Corn Belt States	483,000	455,000	441,000	427,000	409,000
Western States	408,900	397,800	392,500	383,300	376,400
Southeastern States	419,500	412,000	442,500	377,000	366,000
Other	96,970	90,920	87,300	101,290	95,070
Total	1,408,370	1,355,720	1,363,300	1,288,590	1,246,470

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from USDA, NASS, *Cattle,* annual issues.

Table B-2
Number of cattle and calves by regions, as of January 1, 1987-92
(Thousand animals)

Region	1987	1988	1989	1990	1991	1992
Western States	43,080	42,750	43,130	43,170	42,910	44,120
Corn Belt States	34,925	33,945	33,425	33,675	33,735	33,310
Southeastern States	18,293	17,460	17,420	17,330	17,130	17,490
Other	5,702	5,369	5,205	5,162	5,121	5,190
Total	102,000	99,524	99,180	99,337	98,896	100,110

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from USDA, NASS, *Cattle,* annual issues.

Table B-3
Number of cattle feedlots by regions, 1987-91

Year	Corn Belt States[1]	Western States[2]	Total
1987	[3]	[3]	42,662
1988	41,500	5,662	47,162
1989	41,100	5,783	46,883
1990	40,400	5,741	46,141
1991	41,000	5,851	46,851

[1] Illinois, Iowa, Kansas, Minnesota, and Nebraska.
[2] Arizona, California, Colorado, Idaho, Oklahoma, South Dakota, Texas, and Washington.
[3] Not available.

Note.—Because of rounding, figures may not add to totals shown.

Source: USDA, NASS, *Cattle on Feed,* annual issues.

Table B-4
Commercial cattle slaughter: Numbers by regions, 1988-91
(1,000 animals)

Region	1988	1989	1990	1991
Corn Belt States	19,115	18,520	16,834	16,739
Western States	13,079	12,699	11,431	10,796
Southeastern States	1,437	1,366	985	364
Other[1]	1,448	1,332	3,992	4,791
Total	35,079	33,917	33,242	32,690

[1] Also may include slaughter from Corn Belt States, Western States, and Southeastern States, where data are not published so as to avoid disclosing individual operations.

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from USDA, NASS, *Livestock Slaughter,* annual issues.

Table B-5
Labor and total economic costs for cow-calf operations and labor's share of total economic costs, 1987-89

Year	Labor costs per cow for cow-calf operations	Total economic costs per cow for cow-calf operations	Labor costs as a share of total economic costs
	Dollars		Percent
1987	96.77	468.26	21
1988	102.11	533.56	19
1989	107.92	560.56	19

Source: USDA, ERS, *Costs of Production—Livestock and Dairy,* 1989 (ECIFS9-1) Aug. 1990, p. 37.

Table B-6
Labor and total economic costs to grow 100 pounds of fed cattle and labor's share of total economic costs, 1987-89

Year	Labor costs to grow 100 pounds of fed-cattle	Total economic costs to grow 100 pounds of fed-cattle	Labor costs as a share of total economic costs
	Dollars		Percent
1987	1.34	64.14	2
1988	1.35	74.12	2
1989	1.44	76.94	2

Source: USDA, ERS, *Costs of Production—Livestock and Dairy,* 1989 (ECIFS9-1) Aug. 1990, p.34.

Table B-7
Beef and veal: Production in selected countries or regions, 1987-91
(Million pounds)

Country or region	1987	1988	1989	1990	1991[1]
United States[2]	23,995	23,985	23,442	23,070	23,224
European Community	18,678	17,668	17,308	18,303	19,019
The former Soviet Union	18,272	18,960	19,401	19,432	17,990
Brazil	8,818	9,039	8,378	7,937	8,157
Argentina	5,952	5,754	5,732	5,842	5,820
Central & Eastern Europe[3]	4,621	4,385	4,365	4,985	4,308

[1] Preliminary.

[2] Production data for 1990-91 compiled from USDA, ERS, *Livestock and Poultry Situation and Outlook Report* (LPS-51) Jan. 1992, p. 32; production data for 1989 from *Livestock and Poultry Situation and Outlook Report* (LPS-48) July 1991, p. 28; production data for 1987-88 from *Livestock and Poultry Situation and Outlook Report* (LPS-39) Jan. 1990, p. 38.

[3] Bulgaria, Czechoslovakia, East Germany (for statistical purposes), Hungary, Poland, Romania, and Yugoslavia.

Source: Statistics for 1987-88, compiled from USDA, FAS, *World Livestock Situation* (FL&P 4-91) Nov. 1991, p. 60; 1989-91 compiled from USDA, FAS, *World Agricultural Production* (WAP 3-92) Mar. 1992, p. 37; except as noted.

Table B-8
Beef and veal: Exports by selected countries or regions, 1987-91[1]
(Million pounds)

Country or region	1987	1988	1989	1990	1991[2]
European Community[3]	2,035	2,026	2,670	2,304	2,317
Australia	2,002	1,962	1,922	2,346	2,163
New Zealand	952	959	959	791	904
United States[4]	441	473	836	749	872

[1] Trade data relating to fresh, chilled, or frozen beef and veal on an international basis are difficult to compare, in part, because of conflicting distinctions countries use in classifying exports as fresh, chilled, or frozen; prepared or preserved; or meat preparations. The export statistics shown in the table include all beef and veal; the countries shown are thought to include the major exporters of fresh, chilled, or frozen beef and veal.

[2] Preliminary.

[3] Excludes intra-EC trade.

[4] Compiled from official statistics of the U.S. Department of Commerce.

Source: USDA, FAS, *World Livestock Situation* (FL&P 4-91), Nov. 1991, p. 62, except as noted.

Table B-9
Live cattle and fresh, chilled, or frozen meat of cattle: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of January 1, 1992; U.S. exports, 1991; and U.S. imports, 1991

HTS subheading	Brief description	Col. 1 rate of duty As of Jan. 1, 1992 General	Special[1]	U.S. exports, 1991	U.S. imports, 1991
				Thousand dollars	
	Live bovine animals:				
0102.10.00	Purebred breeding animals	Free		92,023	2,751
0102.90.20	Cows imported specially for dairy purposes	Free			9,522
0102.90.40	Other live bovine animals	2.2¢/kg	Free (E,IL) 0.4¢/kg (CA)	95,032	939,727
	Meat of bovine animals, fresh or chilled:				
0201.10.00	Carcasses and half-carcasses	4.4¢/kg	Free (CA,E*,IL)	98,505	18,588
0201.20.20	High-quality beef cuts, processed, with bone in	4%	Free (CA,E*,IL)	(2)	0
0201.20.40	Other processed cuts, with bone in	10%	Free (CA,E*,IL)	(2)	136
0201.20.60	Other cuts with bone in	4.4¢/kg	Free (CA,E*,IL)	91,655	41,883
0201.30.20	High-quality beef cuts, processed, boneless	4%	Free (CA,E*,IL)	(2)	239
0201.30.40	Other processed cuts, boneless	10%	Free (CA,E*,IL)	(2)	16,413
0201.30.60[3]	Other boneless cuts	4.4¢/kg[3]	Free (CA,E*,IL)	455,255	160,740
	Meat of bovine animals, frozen:				
0202.10.00	Carcasses and half-carcasses	4.4¢/kg	Free (CA,E*,IL)	18,725	1,458
0202.20.20	High-quality beef cuts, processed, with bone in	4%	Free (CA,E*,IL)	(2)	28
0202.20.40	Other processed cuts, with bone in	10%	Free (CA,E*,IL)	(2)	34
0202.20.60	Other cuts with bone in	4.4¢/kg	Free (CA,E*,IL)	58,417	1,988
0202.30.20	High-quality beef cuts, processed, boneless	4%	Free (A,E*,IL) 2.4% (CA)	(2)	435
0202.30.40	Other processed cuts, boneless	10%	Free (E*,IL) 6% (CA)	(2)	7,630
0202.30.60[3]	Other boneless cuts	4.4¢/kg[3]	Free (E*,IL) 2.6¢/kg (CA)	461,799	1,455,006

[1] 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), Automotive Products Trade Act (B), Agreement on Trade in Civil Aircraft (C), United States-Canada Free-Trade Agreement (CA), Caribbean Basin Economic Recovery Act (E), and United States-Israel Free-Trade Area (IL).

[2] The value of U.S. exports is not available for this individual HTS subheading. However, total exports of fresh, chilled, or frozen processed beef and veal was $537 million in 1991.

[3] HTS subheading 9903.23.00 provides for a 100-percent ad valorem duty on imports from the EC of beef, without bone (except offal) fresh, chilled, or frozen (provided for in subheading 0201.30.60 or 0202.30.60) under authority of Presidential Proclamation 5759. The Presidential proclamation resulted from EC regulations concerning imports of meat from countries where the use of certain growth stimulants (hormones) is authorized. The EC actions are described in the section of this report entitled "U.S. Government Trade-Related Investigations."

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

Table B-10
Live cattle and calves: U.S. production, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1987-91

Year	Production	Exports	Imports	Apparent consumption[1]	Ratio of imports to consumption
					Percent
	Quantity (1,000 animals)				
1987	40,152	131	1,200	38,792	3.1
1988	40,293	321	1,332	37,880	3.5
1989	40,102	169	1,459	36,329	4.0
1990	39,249	120	2,135	35,277	6.1
1991	39,256	311	1,939	34,375	5.6
	Value (million dollars)				
1987	33,918	105	421	34,234	1.2
1988	37,291	202	598	37,687	1.6
1989	37,339	108	662	37,893	1.7
1990	40,205	88	978	41,095	2.4
1991	[2]42,818	187	952	43,583	2.2

[1] Includes changes in inventories.
[2] Estimated by the staff of the USITC.

Source: Quantity of production (calf crop) and consumption (commercial slaughter) compiled from USDA, ERS, *Livestock and Poultry Situation and Outlook Report* (LPS-52) Feb. 1992; value of production compiled from USDA, NASS, *Meat Animals Production, Disposition and Income,* annual issues, except as noted; imports and exports compiled from official statistics of the U.S. Department of Commerce.

Table B-11
Beef and veal—fresh, chilled, or frozen: U.S. production, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1987-91

Year	Production	Exports	Imports	Apparent consumption	Ratio of imports to consumption
					Percent
	Quantity (Million pounds)				
1987	23,995	441	1,480	25,034	5.9
1988	23,985	473	1,550	25,062	6.2
1989	23,442	836	1,381	23,987	5.8
1990	23,070	749	1,530	23,851	6.4
1991	23,224	872	1,563	23,915	6.5
	Value (million dollars)				
1987	([1])	729	1,333	([1])	([2])
1988	([1])	1,042	1,488	([1])	([2])
1989	([1])	1,392	1,444	([1])	([2])
1990	([1])	1,544	1,658	([1])	([2])
1991	([1])	1,721	1,692	([1])	([2])

[1] Not available.
[2] Not meaningful.

Source: Production for 1990-91 compiled from USDA, ERS, *Livestock and Poultry Situation and Outlook Report* (LPS-51) Jan. 1992, p. 32; 1989 from *Livestock and Poultry Situation and Outlook Report* (LPS-48) July 1991, p. 28,; 1987-88 from *Livestock and Poultry Situation and Outlook Report* (LPS-39) Jan. 1990, p. 38,; imports and exports compiled from official statistics of the U.S. Department of Commerce.

Table B-12
Beef, pork, and poultry: Apparent per capita consumption in the United States, 1987-91
(Pounds)

Year	Beef		Pork		Poultry
	Carcass weight	Retail weight	Carcass weight	Retail weight	Retail weight
1987	103.5	73.5	63.0	59.7	78.5
1988	102.5	72.3	67.2	63.5	81.1
1989	98.4	69.3	67.0	52.0	86.4
1990	96.1	67.8	64.1	49.8	90.7
1991	95.4	67.2	65.1	50.5	94.9

Source: Data for 1987-88 compiled from USDA, ERS, *Livestock and Poultry Situation and Outlook Report* (LPS-39) Jan. 1990, p. 38-39 and p. 43, data for 1989 compiled from *Livestock and Poultry Situation and Outlook Report* (LPS-49) Aug. 1991, pp. 34-35. Data for 1990-91 compiled from *Livestock and Poultry Situation and Outlook Report* LPS-51) Jan. 1992, pp. 32-33.

Table B-13
Live cattle and calves: U.S. imports for consumption, by principal sources, 1987-91

Source	1987	1988	1989	1990	1991
	Quantity (1,000 animals)				
Canada	(1)	(1)	585	874	905
Mexico	(1)	(1)	874	1,261	1,034
All other	(1)	(1)	1	(2)	(2)
Total	1,200	1,332	1,459	2,135	1,939
	Value (million dollars)				
Canada	(1)	(1)	377	559	590
Mexico	(1)	(1)	284	419	361
All other	(1)	(1)	1	(3)	(3)
Total	421	598	662	978	952

[1] Country-level detail is provided for years in which there are actual trade data under the Harmonized Tariff Schedule of the United States (HTS) and the new Schedule B (based on HTS).
[2] Less than 500 animals.
[3] Less than $500,000.

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-14
Beef and veal—fresh, chilled, or frozen: U.S. imports for consumption, by principal sources, 1987-91

Source	1987	1988	1989	1990	1991
	Quantity (million pounds)				
Australia	(1)	(1)	602	797	771
New Zealand	(1)	(1)	483	423	467
Canada	(1)	(1)	164	166	175
All other	(1)	(1)	132	144	150
Total	1,480	1,550	1,381	1,530	1,563
	Value (million dollars)				
Australia	(1)	(1)	628	841	810
New Zealand	(1)	(1)	483	423	467
Canada	(1)	(1)	161	176	184
All other	(1)	(1)	172	218	231
Total	1,333	1,488	1,444	1,658	1,692

[1] Country-level detail is provided for years in which there are actual trade data under the HTS and the new Schedule B (based on HTS).

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-15
Beef and veal: Imports by selected countries and regions, 1987-91[1]
(Million pounds)

Country or region	1987	1988	1989	1990	1991[2]
Japan	694	838	1,098	1,184	1,124
European Community[3]	899	1,109	1,085	1,005	955
The former Soviet Union	313	258	331	551	573
Canada	298	337	348	408	441
Republic of Korea	0	44	183	258	353

[1] Trade data relating to fresh, chilled, or frozen beef and veal on an international basis are difficult to compare, in part, because of conflicting distinctions countries used in classifying imports as fresh, chilled, or frozen; prepared or preserved; or meat preparations. The import statistics shown in this table include all beef and veal. The countries in the table are thought to include the major importers of fresh, chilled, or frozen beef and veal.

[2] Preliminary.

[3] Excludes intra-EC trade.

Source: USDA, FAS, *World Livestock Situation* (FL&P 4-91), Nov. 1991, p. 61.

Table B-16
Live cattle: U.S. exports of domestic merchandise, by principal markets, 1987-91

Market	1987	1988	1989	1990	1991
	Quantity (thousand animals)				
Mexico	(1)	(1)	125	64	210
Canada	(1)	(1)	23	35	88
All other	(1)	(1)	21	21	13
Total	131	321	169	120	311
	Value (thousand dollars)				
Mexico	(1)	(1)	72,512	55,357	132,861
Canada	(1)	(1)	10,155	14,930	36,154
All other	(1)	(1)	25,984	18,189	18,040
Total	105,231	201,840	108,351	88,476	187,055

[1] Country-level detail is provided for years in which there are actual trade data under the HTS and the new Schedule B (based on HTS).

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-17
Beef and veal—fresh, chilled, or frozen: U.S. exports, by principal markets, 1987-91

Market	1987	1988	1989	1990	1991
	Quantity (1,000 pounds)				
Japan	(1)	(1)	595,740	423,056	385,546
Canada	(1)	(1)	69,238	143,031	188,857
Mexico	(1)	(1)	65,268	61,691	140,254
Republic of Korea	(1)	(1)	47,472	71,771	107,855
All other	(1)	(1)	58,078	49,859	49,850
Total	441,321	472,958	835,796	749,408	872,362
	Value (million dollars)				
Japan	(1)	(1)	1,002	951	879
Canada	(1)	(1)	119	287	365
Mexico	(1)	(1)	76	80	184
Republic of Korea	(1)	(1)	79	116	177
All other	(1)	(1)	116	111	116
Total	729	1,042	1,392	1,544	1,721

[1] Country-level detail is provided for years in which there are actual trade data under the HTS and the new Schedule B (based on HTS).

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-18
Live cattle and calves: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries, 1987-91[1]

(Million dollars)

Item	1987	1988	1989	1990	1991
U.S. exports of domestic merchandise:					
Canada	(2)	(2)	23	35	88
Mexico	(2)	(2)	125	64	210
All other	(2)	(2)	21	21	13
Total	131	321	169	120	311
U.S. imports for consumption:					
Canada	(2)	(2)	377	559	590
Mexico	(2)	(2)	284	419	361
All other	(2)	(2)	1	(3)	(3)
Total	421	598	662	978	952
U.S. merchandise trade balance:					
Canada	(2)	(2)	-354	-524	-502
Mexico	(2)	(2)	-159	-355	-151
All other	(2)	(2)	20	21	13
Total	-290	-277	-493	-858	-641

[1] Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

[2] Country-level detail is provided only for years in which there are actual trade data under the HTS and the new Schedule B (based on HTS).

[3] Less than $500,000.

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-19
Beef and veal—fresh, chilled, or frozen: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries, 1987-91[1]

(Million dollars)

Item	1987	1988	1989	1990	1991
U.S. exports of domestic merchandise:					
Japan	(2)	(2)	1,002	951	879
Australia	(2)	(2)	(3)	(3)	(3)
Canada	(2)	(2)	119	287	365
New Zealand	(2)	(2)	(3)	(3)	(3)
All other	(2)	(2)	271	306	477
Total	729	1,042	1,392	1,544	1,721
U.S. imports for consumption:					
Japan	(2)	(2)	(3)	(3)	(3)
Australia	(2)	(2)	628	841	810
Canada	(2)	(2)	161	176	184
New Zealand	(2)	(2)	483	423	467
All other	(2)	(2)	172	218	231
Total	1,333	1,488	1,444	1,658	1,692
U.S. merchandise trade balance:					
Japan	(2)	(2)	1,002	951	879
Australia	(2)	(2)	-628	-841	-810
Canada	(2)	(2)	-42	111	181
New Zealand	(2)	(2)	-483	-423	-467
All other	(2)	(2)	99	88	246
Total	-604	-446	-52	-114	29

[1] Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

[2] Country-level detail is provided only for years in which there are actual trade data under the HTS and the new Schedule B (based on HTS).

[3] Less than $500,000.

Note.—Because of rounding, figures may not add to the totals shown.

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