



United States
Department
of Agriculture

LDP-M-96-01
June 2002



Electronic Outlook Report from the Economic Research Service

www.ers.usda.gov

World Events Frame Outlook for Livestock, Dairy, and Poultry

Delmy L. Salin, Coordinator (dsalin@ers.usda.gov)

Abstract

In 2001, U.S. red meat and poultry production stabilized as lower beef production was partially offset by higher pork and poultry production. In 2002, slightly larger projected growth in meat production (2 percent) and lower exports are expected to result in lower wholesale prices for cattle, hogs, and poultry. Recovery in milk per cow is expected to override declining milk cow numbers and boost 2002 milk production by 2 to 3 percent.

This report examines changes in the livestock, dairy, and poultry industry in 2001 and provides initial assessments of 2002 based on forecasts from the June 2002 *World Agricultural Supply and Demand Estimates*. Readers who would like more detail should refer to the *Livestock, Dairy, and Poultry Situation and Outlook (LDP)* monthly newsletter that provides timely livestock, dairy, and poultry information, focusing on current production, price, and trade statistics for each of the sectors.

Keywords: Outlook, livestock, red meat, dairy, poultry.

Acknowledgments

The coordinator would like to acknowledge Joy Harwood, Janet Perry, Dennis Shields, Leland Southard, and Dale Simms for their helpful suggestions and comments during the preparation of this article, as well as Shayle D. Shagam, Joel L. Greene, Milton Madison, and Tim Rocke for their comments and reviews. Appreciation also is extended to James Miller, Ron Gustafson, William Hahn, David Harvey, Annette Clauson, Mildred Haley, Keithly Jones and Dale Leuck for their keen insights. Thanks also to Wynnic Pointer-Napper for her technical assistance.

Summary

The U.S. economy began to weaken in March 2001, and was further buffeted by the events of September 11. These events resulted in a shift in consumer preferences away from restaurants, which demand high-quality cuts of meat, toward eat-at-home or take-out-food. Underscoring this trend, food-away-from-home expenditures shifted in the second half of 2001 from full-service meals and snacks (restaurants) to limited-service meals and snacks (fast food places).

In 2001, lower beef production was partially offset by higher pork and poultry production.¹ U.S. per capita meat consumption declined to 213.3 pounds in 2001. Total meat exports reached a record 10.1 billion pounds in 2001, up nearly 8 percent over 2000.

¹ This report examines changes in the livestock, dairy and poultry industry in 2001 and provides initial assessments of 2002 based on forecast from the June 2002 *World Agricultural Supply and Demand Estimates*. Readers who would like more detail should refer to the *Livestock, Dairy, and Poultry Situation and Outlook (LDP)* monthly newsletter that provides timely livestock, dairy and poultry information, focusing on current production, price, and trade statistics for each of the sectors.

In 2002, slightly larger projected growth in meat production (2 percent) and sharply lower exports are expected to result in lower wholesale prices for cattle, hogs, and poultry. Total red meat and poultry exports in 2002 are expected to decrease 7 percent due largely to a strong dollar, worldwide economic weakness, animal disease concerns, and increased competition from other countries. Due to recent bans of U.S. poultry exports by Russia, Japan, Ukraine, Mexico, and the Philippines, total poultry exports are forecast to decline 11 percent in 2002, reversing steady growth since 1999.

Milk production slipped 1 percent in 2001, a result of slightly lower milk cow numbers and the unfavorable effects of weather and forage on output per cow. Lower returns and the continued tight heifer and hay markets will override expansion pressures and bring milk cow numbers fractionally lower in 2002. Recovery in milk per cow is expected to outweigh declining milk cow numbers and boost 2002 milk production 2 to 3 percent. Farm milk prices are expected to drop more than \$2 per cwt in 2002 as a result of this increase in supply and somewhat weaker demand.

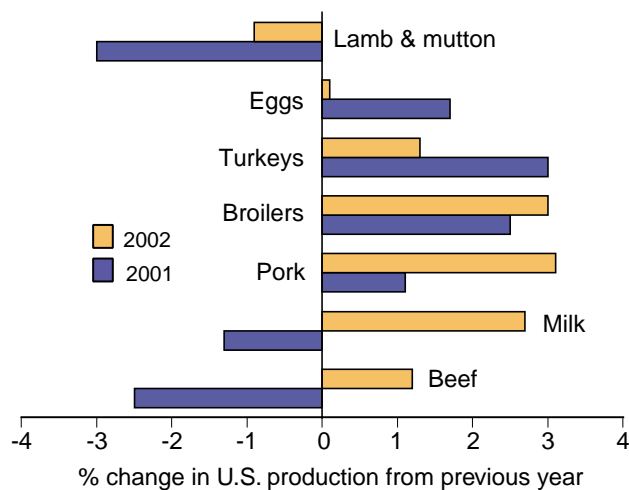
Beef: Record Prices and Lower Exports in 2001; Lower Prices in 2002

Commercial beef production in 2001 totaled 26.1 billion pounds, down 2.5 percent from 2000 (fig. 1). Extreme weather in 2001—severe winter weather early in the year and drought in the second half—in many areas reduced herds despite stronger feeder cattle prices, low grain prices, and positive cow-calf returns above cash costs. All this marked 2001 as the sixth year of the downturn in the cattle cycle (fig. 2). In 2002, beef production will likely increase slightly as carcass weights average higher and dry weather again causes producers to delay heifer retention, preventing feedlot placements from dropping substantially. Heifer retention and herd expansion will depend on the availability of forage and water supplies throughout 2002.

Reduced beef supply and severe winter weather supported cattle prices in 2001. Consequently, fed cattle prices were strong in 2001, averaging \$72.71 per hundredweight (cwt), up 4 percent from a year earlier. Feeder cattle prices increased 2 percent compared with 2000, averaging \$88.20 per cwt, and cow prices increased to \$44.39 per cwt. However, heavy carcass weights, increasing imports, and continued heavy placements of heifers in feedlots are moderating cattle prices in 2002. Fed cattle prices are forecast to decline to the high-\$60s in 2002.

Figure 1

Production of most animal products up in 2001

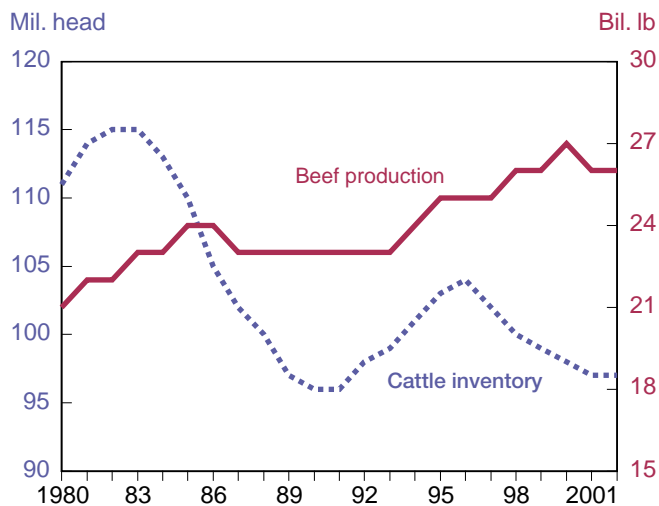


2002 forecast.

Source: June *World Agricultural Supply and Demand Estimates*, USDA.

Figure 2

2001 marked the sixth year of declining U.S. cattle inventory, January 1, 1980-2002



2002 forecast.

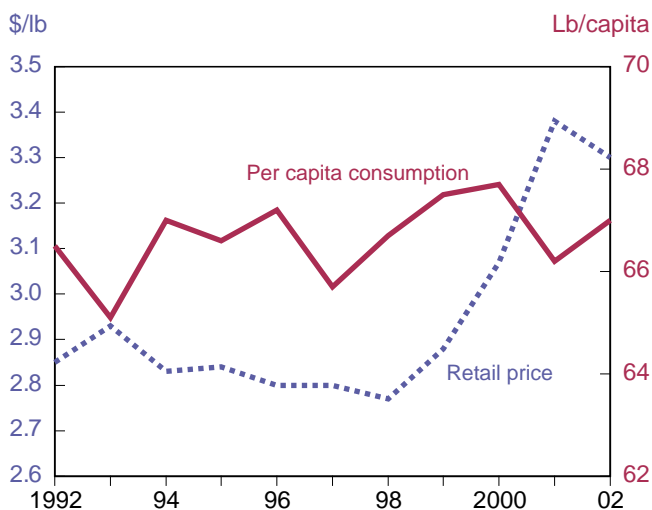
Source: June *World Agricultural Supply and Demand Estimates*, Cattle, USDA.

Composite retail prices for Choice beef averaged a record \$3.38 a pound in 2001, up 31 cents from a year earlier (fig. 3). A drop in beef supplies led to record retail prices, especially for high-quality beef cuts, through early summer. The rise in retail Choice beef prices widened the farm-to-retail price spread to \$1.83 per pound, an increase of 26 cents per pound compared with 2000. Even though the net farm value rose by just over 5 cents in 2001, the farmer's share of the retail price of a pound of Choice beef declined from 48.6 percent to 45.8 percent because retail prices rose faster than farm prices. Per capita beef consumption declined over 1 pound in 2001 and is expected to rise marginally in 2002.

Lower domestic supplies, a strong U.S. dollar, high U.S. beef prices, bovine spongiform encephalopathy (BSE) in Japan, and slowdown in the world economy reduced U.S. beef exports by 8 percent in 2001. Total U.S. beef exports are expected to rise only slightly in 2002 as U.S. prices are expected to continue high and worldwide economic growth is expected to remain sluggish. Japan, the largest importer of U.S. beef, accounted for 44 percent of total U.S. beef exports in 2001. Japanese beef consumption declined in 2001,

Figure 3

Beef prices remain high in 2002 as consumption levels off



Annual average retail price. 2002 forecast.

Source: June *World Agricultural Supply and Demand Estimates*, USDA.

especially after the discovery of BSE in early September. The recovery of the Japanese beef market in 2002 will largely depend upon restoring consumer confidence in the meat market.

Mexico is the second largest market, accounting for 23 percent of total U.S. beef exports by volume in 2001. Export growth to Mexico slowed from 11 percent in 2000 to only 3 percent in 2001 due to the slowdown in the Mexican economy. Strong demand in the United States and drought conditions in both Mexico and Canada were responsible for an 11-percent increase in U.S. cattle imports in 2001 and a 7-percent decline in cattle exports. However, declining inventories in Mexico, poor forage conditions, and weaker feeder

The New Agricultural Trade Negotiations: Background and Issues for the U.S. Beef Sector

New negotiations on trade in agriculture were recently initiated by the World Trade Organization (WTO). The negotiations focus on extending the gains to world trade achieved in the 1994 Uruguay Round Agreement on Agriculture (URAA), which limited the use of tariffs and non-tariff barriers, export subsidies, and the type and level of spending for domestic support programs. For the beef sector, the URAA further boosted U.S. and world beef trade. While export subsidies and nontariff barriers may continue to limit the market for U.S. beef exports, obtaining additional increases in market access in these negotiations may increase U.S. beef exports. For more information, see *The New Agricultural Trade Negotiations: Background and Issues for the U.S. Beef Sector* by Dale Leuck (<http://www.ers.usda.gov/publications/ldp/dec01/>).

cattle prices in the United States may dampen Mexican feeder cattle exports to the U.S. in 2002. More information about Mexican cattle exports to the United States can be found in *Mexican Cattle Exports to U.S.: Current Perspectives* (<http://www.ers.usda.gov/publications/AgOutlook/june2001/AO282d.pdf>).

For more information on the domestic beef sector contact, Ronald Gustafson, 202-694-5174, ronaldg@ers.usda.gov; for the international beef sector, contact Dale Leuck, 202-694-5186, djleuck@ers.usda.gov.

Pork: Hog Prices Lower and Demand Weaker for Pork Products in 2002

Commercial pork production in 2001 totaled 19.1 billion pounds, up 1 percent compared with 2000 (fig. 1). Due in part to large financial losses in 1998 and 1999, the number of sows farrowing declined, resulting in a smaller pig crop (pigs per litter remained nearly unchanged). This was more than offset by a rise in hog imports. As a result, annual slaughter was unchanged, but a 2-pound increase in the average dressed weight boosted pork production by 1 percent. Commercial pork production in 2002 is expected to increase 3 percent due to a 2-pound increase in dressed weights and a larger slaughter. Both the pig crop and hog imports are expected to increase.

Strong export demand tightened supplies and pushed hog prices in 2001 up more than \$1 from a year earlier, to \$45.81 per cwt (fig. 4). Record retail beef prices helped boost retail pork prices. The farm-to-retail price spread widened by 9 cents, as net farm value of pork rose by only 2 cents and retail prices increased by 11 cents. The farmers' share of the value of a pound of pork (retail) declined from 31 percent in 2000 to 30 percent in 2001. In the face of higher retail prices, per capita consumption of pork declined by 1 pound compared with 2000. Hog prices in 2002 are expected to decline to the mid-\$30's per cwt due to larger pork

production, lower exports, and a greater supply of competing meats such as poultry and beef.

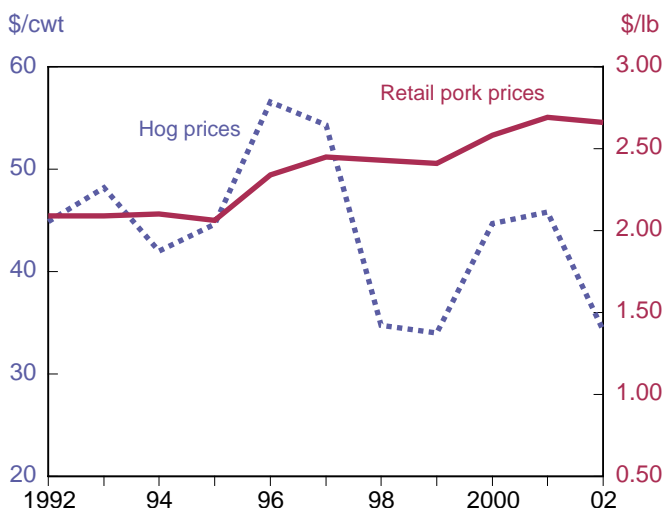
U.S. pork exports in 2001 reached a record of nearly 1.6 billion pounds, up 21 percent over 2000. This represents over 8 percent of total U.S. pork production (fig. 5). Japan is the largest U.S. pork market, accounting for nearly 48 percent of total U.S. pork exports in 2001. U.S. exports to Japan rose 28 percent in 2001, to 743.5 million pounds. The increase was likely due in part to food safety concerns: foot-and-mouth disease (FMD) in Europe and BSE in Japan caused Japanese consumers to substitute more U.S. pork into their diets.

Mexico and Canada imported larger quantities of U.S. pork as well last year. U.S. pork exports to Mexico, the second largest U.S. pork market, increased 9 percent in 2001. Mexico represents 20 percent of total U.S. pork exports. U.S. pork exports to Canada, the third largest (12 percent) U.S. pork market, increased 34 percent in 2001.

Currently, expectations are for a 5-percent decline in U.S. pork exports in 2002. Static economic growth in Japan and increased competition from Canadian pork products in Mexico are likely to temper demand for

Figure 4

Hog prices expected to fall in 2002

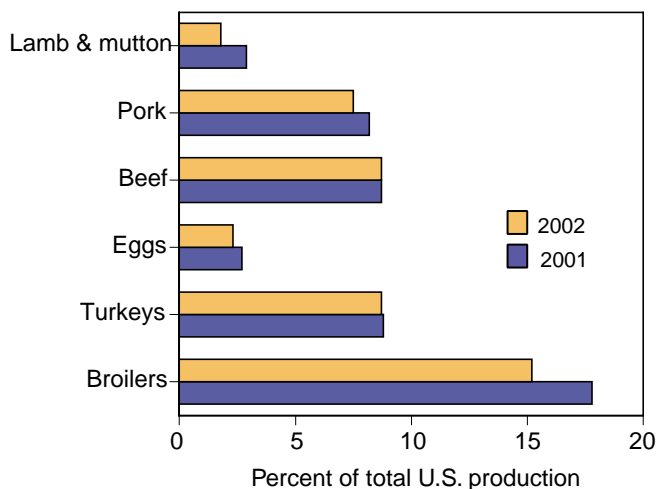


2002 forecast.

Source: June World Agricultural Supply and Demand Estimates, USDA.

Figure 5

Exports of most animal products forecast to slip as percent of total production in 2002



2002 forecast.

Source: June World Agricultural Supply and Demand Estimates, USDA.

U.S. pork. In addition, U.S. pork exports face strong competition from Brazil in the Russian market.

Pork imports in 2001 declined nearly 2 percent to 950 million pounds (Canada is the major supplier of live hogs and pork to the United States). On the other hand, live hog imports totaled more than 5.3 million hogs, an increase of about 22 percent over 2000. Feeder pigs (under 110 pounds) accounted for 59 percent of total U.S. hog imports. Factors behind the surge include lower and less volatile U.S. feed costs, greater available

slaughter capacity in the United States, and rapid expansion of the Canadian sector. More information about financial prospects for hog producers and structural changes in the hog industry can be found in *Financial Prospects for Hog Producers Generally Favorable* by Southard and Haley (<http://www.ers.usda.gov/publications/AgOutlook/sep2001/ao284b.pdf>).

For more information on the pork sector, contact Mildred Haley, 202-694-5176, mhaley@ers.usda.gov.

Sheep: Imports Up, Production and Prices Down in 2002

In 2001, the U.S. sheep industry continued its long decline, marked by lower inventories, prices, and revenues. The industry has been hurt by heightened concerns about sheep-borne animal diseases, as well as the removal of a tariff-rate quota (TRQ) on imported lamb meat from Australia and New Zealand. U.S. commercial production of lamb and mutton in 2001 was 223 million pounds, down 3 percent from 2000 (fig. 1). Large supplies of moderately overweight (less desirable) lambs kept prices relatively low, averaging \$72.04 per cwt in 2001, down 9 percent from a year earlier. Lamb prices are expected to continue to decline—12 percent in 2002—due to increased competition from Australia and New Zealand (fig. 6).

Lamb and mutton imports increased by 12 percent in 2001, offsetting the decrease in domestic supply. U.S. lamb and mutton imports totaled 146 million pounds in 2001. Australia and New Zealand provided 99 percent of all U.S. imports. Their smaller, grass-fed animals have found favorable consumer acceptance in the United States. A TRQ was in effect for 10 months in 2001, but imports were still higher than previous years. Weak Australian and New Zealand currencies

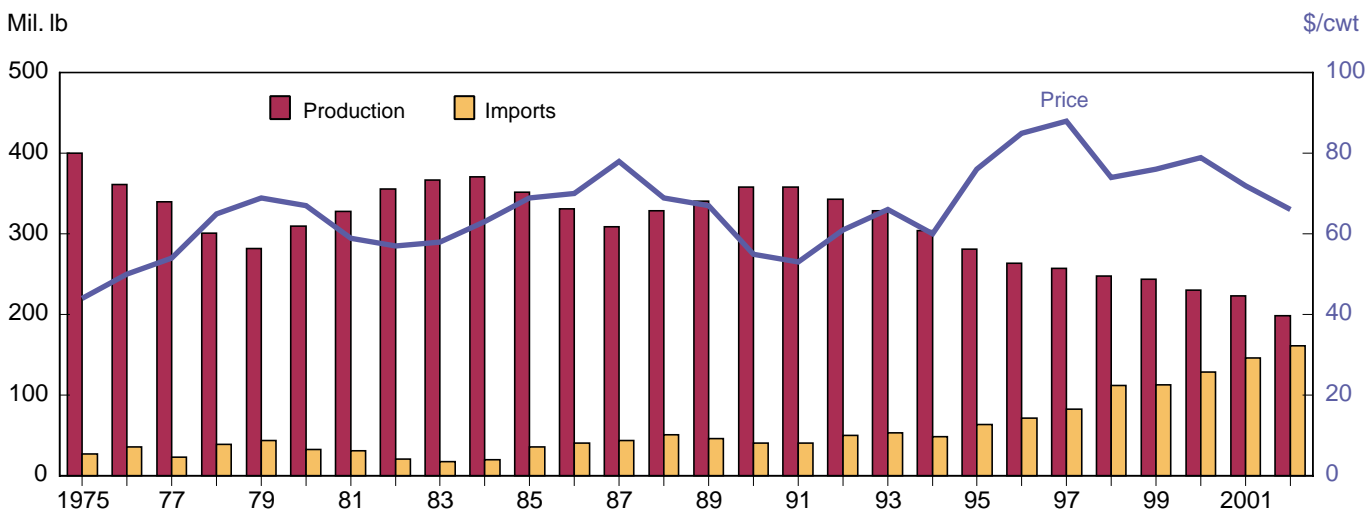
along with demand for imported lamb largely offset the effects of tariffs. On November 15, 2001, the United States acted to comply with the World Trade Organization (WTO) ruling by removing tariffs on Australian and New Zealand lamb.

To support the industry, the USDA's Lamb Meat Adjustment Program was extended through July 31, 2003, with an additional \$37.7 million in Federal aid. Of that, \$26 million will be allocated to purchase or retain ewe lambs, while the remainder will be restricted to direct payments to producers for slaughter and feeder lambs. On April 8, 2002, USDA's Agricultural Marketing Service (AMS) issued a final rule on the establishment of a national industry-funded **Lamb Promotion, Research, and Information Order**. This program is designed to increase the demand for lamb and lamb products. In addition, the **Farm Security and Rural Investment Act of 2002** contains nonrecourse marketing assistance loan provisions for wool and mohair.

For more information on the sheep industry, contact Keithly Jones, 202-694-5172, kjones@ers.usda.gov.

Figure 6

Lamb prices fall amid increasing imports and declining production



2002 forecast.

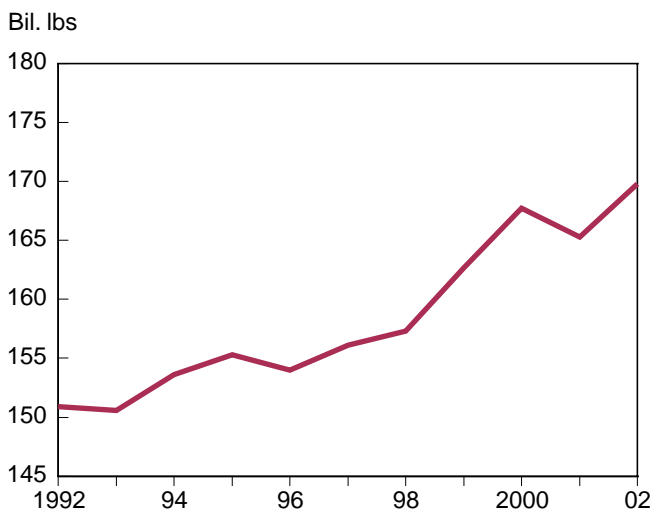
Source: Economic Research Service, USDA.

Dairy: 2001 Dairy Prices Soar as Milk Output Slips; Reversal Seen in 2002

Moderate dairy farm exits (the result of low 2000 returns) and tight supplies of replacement heifers and high quality forage resulted in a slight decline in milk cow numbers in 2001. With milk per cow battered by weather and forage conditions, milk production also slipped. Milk production declined to 165.3 billion pounds, down 1.3 percent from 2000 (fig. 1). Cow numbers were down 1 percent, while milk per cow was virtually the same. Milk cow numbers are expected to decline fractionally in 2002 due to lower returns and continued tight heifer and hay markets. However, recovery in milk per cow is expected to boost 2002 milk production 2 to 3 percent (fig. 7).

Strong demand for dairy products and a slight decline in production in 2001 resulted in the highest farm milk price since 1998. The average farm milk price for 2001 was \$15.05 per cwt, up 21 percent from the previous year (fig. 8). Farm milk prices in 2002 are expected to drop more than \$2 per cwt. The retail price index for all dairy products (measured by the Bureau of Labor Statistics) increased 4 percent in 2001, and is expected to increase 1 to 2 percent in 2002.

Figure 7
Milk production to bounce back in 2002



2002 forecast.

Source: June *World Agricultural Supply and Demand Estimates*, USDA.

Heifer Math & the Western Dairy Industry

Recovery in milk production in 2001 continued to be limited by the inability of replacement heifer supplies to keep up with rising demand. Record heifer prices prevailed despite relatively large supplies of replacement heifers. The January 1 inventory showed a record 44.6 dairy replacements (500 pounds and over) per 100 milk cows. But culling rates have increased to the extent that these supplies were insufficient to replace the culls and provide heifers for expanding farms.

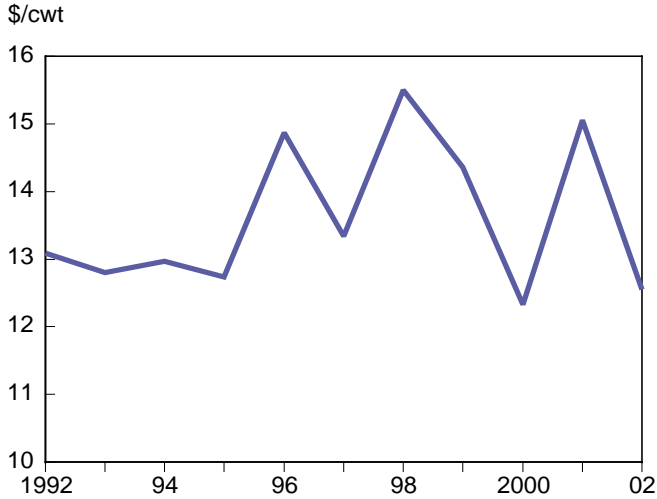
The heifer situation affected milk cow numbers by discouraging expansions and delaying full use of currently existing capacity. However, the effect on cow numbers has been mitigated by two factors: (1) keeping some cows that normally would be culled from continuing herds; (2) selling some cows as replacements, instead of for slaughter, from exiting herds. Unusual retention of inferior cows compromised average milk per cow. For more information, see *Dairy Industry in 2002 to Encounter Uncertain Climate of Demand* by James Miller (<http://www.ers.usda.gov/publications/agoutlook/dec2001/ao287c.pdf>).

Commercial use of milkfat and skim solids in 2001 reached record levels, the equivalent of 169.4 billion pounds of milk on a milkfat basis and 163.7 billion pounds on a skim-solids basis. Commercial use of butter was unchanged, even though prices jumped enough to draw in substantial imports over tariff-rate-quotas (TRQ). Commercial use of cheese increased by 1 percent despite a 25-percent increase in prices. While demand for butter and cheese grew, demand for fluid milk, ice cream, and most other perishable manufactured products declined slightly.

Reduced production as well as increased domestic use and commercial exports resulted in smaller price support purchases of nonfat dry milk in 2001. Removals under the Dairy Export Incentive Program (DEIP)

Figure 8

Farm milk prices to slip in 2002



2002 forecast.

Source: June *World Agricultural Supply and Demand Estimates*, USDA.

remained about the same. In 2002, government purchases of nonfat dry milk are expected to stay large.

Strong Asian demand and relatively modest export supplies of nonfat dry milk increased international prices sharply in late 2000. The strong prices held through most of 2001. However, rising export supplies and sluggish import demand dropped prices in late 2001-early 2002. Prices are expected to stay low through 2002. International butter prices were weak throughout the period.

For more information on the dairy industry, contact James Miller 202-694-5184, jjmiller@ers.usda.gov.

Higher Production and Exports in 2001

U.S. poultry (broiler, turkey, and other chicken) production in 2001 reached 36.9 billion pounds on a net ready-to-cook basis, up 2.4 percent from 2000. While domestic consumption increased 1 percent over 2000, exports increased by 12 percent, absorbing the increased production. Most of the increase was due to the recovery of exports to Russia.

In 2002, poultry production is expected to grow at about the same rate as in 2001. In contrast, total poultry exports are forecast to decline 11 percent due to bans by several countries (Japan, Ukraine, Mexico, Philippines, and Russia). In addition, U.S. poultry exports are expected to face increasing competition in the world market in 2002, especially from Brazil, one of the lowest cost poultry producers in the world.

Broilers: Record Exports and Higher Wholesale Broiler Prices in 2001; Exports To Slip in 2002

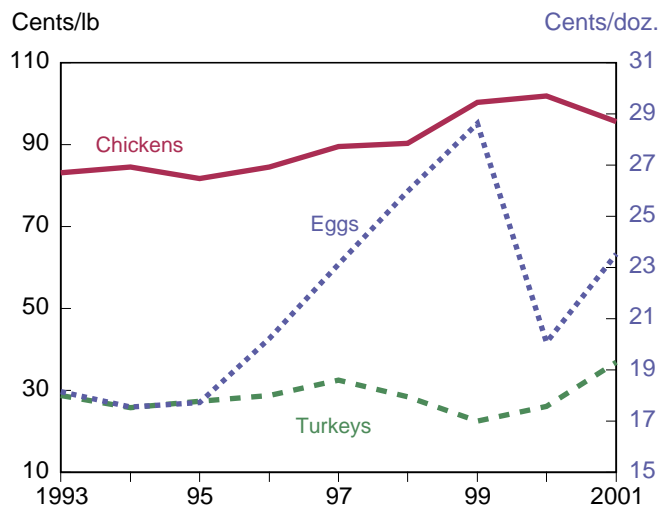
Federally inspected broiler production rose 2.5 percent in 2001, to 31.3 billion pounds, and is expected to increase 3 percent in 2002 (fig. 1). In 2001, higher wholesale broiler prices and continued low feed costs supported the increase in average bird weights and the number of broiler chick placements.

Wholesale composite broiler prices increased by 16 percent in 2001, to 62 cents per pound, while composite retail prices for chicken rose by less than 2 percent, narrowing the [wholesale-to-retail price spread](#) by 6 percent (fig. 9). Since the mid-1990s, foreign demand for dark meat and boneless meat has increased faster than the domestic demand for white meat. This has narrowed the difference between white and dark meat prices. In 2001, retail breast meat prices declined slightly while leg bone-in prices increased by over 3 percent.

The production increase in 2001 was absorbed by higher exports that consist primarily of dark meat (drumsticks, thighs, deboned leg meat, and leg quarters). Total U.S. broiler exports² increased almost 12 percent in

² Exports of U.S. broiler meat exclude exports of chicken feet (paws), which are not reported in federally inspected broiler production.

Figure 9
Poultry wholesale-to-retail price spreads



Source: Economic Research Service, USDA.

2001. Exports of 5.6 billion pounds accounted for about 18 percent of U.S. broiler production in 2001 (fig. 5). Exports grew mainly because of the increase in direct shipments to Russia, which totaled 2.3 billion pounds in 2001 (41 percent of all U.S. broiler exports). Part of the increase in direct shipments to Russia was due to less transshipment through both Latvia and Estonia. These three countries combined represent the largest market for U.S. broiler exports.

China and Hong Kong combined represent the second largest market (15 percent) for U.S. broiler exports, totaling about 858 million pounds in 2001. In 2001, total broiler exports to Mexico amounted to 381 million pounds, an increase of about 9 percent over 2000, making it the third largest market for U.S. broiler exports by volume. Other countries showing considerable growth in U.S. broiler imports were Korea, Guatemala, Jamaica, Colombia, and Haiti.

Broiler exports are expected to decline nearly 12 percent in 2002. From March 10-April 15, 2002, Russia imposed a ban on all U.S. poultry products. The Russian government claimed that poultry products from U.S. plants were not meeting protocols for inspection and had tested positive for salmonella. Although the bans have been lifted, the need for certificates and other delays have slowed the resumption of exports to Russia.

Institutional Reform in Russia: What Are the Prospects?

Russia is a key customer for U.S. agricultural exports, especially meats. But the institutions inherited from the Soviet Union make it a relatively high-cost and risky country in which to do business. Western exporters operating in Russia face substantial costs in transporting meat between ports and provincial regions, in obtaining information about agricultural markets, and in enforcing contracts. Unreformed institutions have so far withstood most attempts to alter them. For more information, see *Institutional Reform in Russia: What Are the Prospects?* by Stefan Osborne (<http://www.ers.usda.gov/publications/AgOutlook/Mar2001/AO279D.pdf>).

Other markets are also being affected by bans. On January 1, 2002, the Ukraine banned U.S. chicken imports, citing the use of antibiotics in U.S. broiler production and antimicrobial rinses in U.S. processing plants. Because U.S. poultry exports to the Ukraine varied widely in volume, it is difficult to determine the impact on trade shipments. In 1999, for example, shipments were over 100 million pounds, but fell to just over 1 million pounds in 2000. In 2001, shipments totaled 33 million pounds.

Japan (the fourth largest market by volume) has enacted a series of bans on imports of poultry products from specific U.S. States. These bans have been based on outbreaks of low-pathogenic strains of Avian Influenza (AI). At different times, bans have been enacted by at least one country on poultry products from Pennsylvania, Maine, Virginia, West Virginia, North Carolina, and Texas.

Turkeys: Exports and Prices Decline in 2002

U.S. turkey production in 2001 set a record, totaling 5.6 billion pounds, 3 percent higher than the previous year due to greater turkey slaughter and heavier average weights (fig. 1). Wholesale whole-bird prices averaged 66.3 cents per pound, down about 6 percent compared with 2000. Retail whole-bird prices rose by 6 percent, widening the wholesale-to-retail price spread by almost 33 percent over 2000 (fig. 9). Strong production increases in the second half of the year held down seasonal price increases, resulting in a decline in

2001 wholesale whole-bird prices. Due to the high capital investment required in growing and processing turkey products, it takes a big drop in wholesale prices to create disincentives sufficient for growers to reduce production. Turkey production is expected to increase slightly in 2002, and wholesale whole-bird prices are expected to decline 2-3 percent.

U.S. turkey exports in 2001 were 487 million pounds, up 9 percent over 2000. Exports accounted for about 9 percent of total production (fig. 5). The increase in exports came mostly from higher shipments to Russia, Poland, and countries of the former Soviet Union, which offset a slowdown in exports to Mexico, the largest market. Exports to these countries consist mostly of Mechanically Deboned Meat (MDM) that is used for sausage production. U.S. turkey exports to Mexico declined by 6 percent to 220 million pounds in 2001 due to the slowdown of the Mexican economy. Mexico imports mostly MDM and fresh and chilled turkey parts, which are used to produce sausages and cold meats.

Russia is the second largest market for U.S. turkey exports, totaling 80.8 million pounds in 2001, an increase of 54 percent over 2000. U.S. turkey exports are expected to be flat in 2002 as lower exports to Russia are offset by increases to Mexico and other countries.

Egg Production Expected Flat and Exports Forecast To Decline in 2002

Total U.S. egg production in 2001, table and hatching, totaled nearly 7.2 billion dozen, nearly 2 percent more than 2000. Egg production is expected to increase by less than 1 percent in 2002 (fig. 1). Table eggs accounted for 85 percent of total production in 2001, and are expected to maintain the same proportion in 2002. Hatching egg production has increased more slowly than broiler meat production due to gains in hatchability and higher average slaughter bird weight.

Wholesale table egg prices averaged 67.2 cents a dozen in 2001, down nearly 3 percent from 2000. However, retail egg prices increased by 1.6 percent, widening the wholesale-to-retail spread by 14 percent (fig. 9). Retail egg prices had declined in each of the previous 4 years. The wholesale egg market is a thin market with a short-shelf life product, making it very sensitive to changes in supply.

Per capita egg consumption in 2001 rose slightly to 252.6 eggs, partly due to increasing demand for break-

ing eggs by the commercial baking, confections, and fast food industries. Wholesale table egg prices in 2002 are expected to decline 3-4 percent due to a larger supply of eggs and declining exports.

U.S. egg exports in 2001 were 190 million dozen, up 11 percent and nearly 3 percent of total U.S. egg production (fig. 5). Shell eggs (for human consumption and hatching) accounted for almost half of total U.S. exports. Canada, Japan, Belgium, Hong Kong, and Mexico were the largest export markets, receiving nearly three-quarters of U.S. egg exports. The huge

increase in exports to Belgium (due to a shortfall in European production) offset a 30-percent decline in exports to Japan and Mexico. U.S. egg exports in 2002 are expected to decline nearly 14 percent due to higher Mexican egg production and a slowdown in the Mexican economy. In addition, egg production in the EU is recovering.

For more information on the poultry industry, contact David Harvey, 202-694-5177, djharvey@ers.usda.gov. For information on eggs, contact Fawzi Taha, 202-694-5178, ftaha@ers.usda.gov.

Selected Readings

Mandatory Price Reporting for Livestock Industry

Livestock packers and importers whose operations exceed certain levels must now report frequent and detailed information to USDA on the price, quantity, and characteristics of livestock they buy and sell. The purpose of USDA's Mandatory Price Reporting system is twofold: to provide all livestock producers with timely market information for operating in a changing marketing environment, while meeting consumer demand for meat and meat products. For more information, see *Mandatory Price Reporting for Livestock Industry* by Mildred Haley (<http://www.ers.usda.gov/publications/AgOutlook/sep2001/ao284c.pdf>).

In fall 2002, the ERS plans to begin publishing data on retail meat-cut prices and sales based on scanner data purchased from vendors.

Animal Diseases and Livestock Drugs

Two animal diseases affected European agriculture in 2001. Foot-and-mouth disease (FMD) and bovine spongiform encephalopathy (BSE or "mad cow disease") have made headlines throughout the world. Both diseases affect livestock product prices, availability of goods, and costs of production. Trade is also affected as governments restrict imports from infected countries. Additional information can be found in *Dissecting the Challenges of Mad Cow & Foot-and-Mouth Disease* by K. Mathews and J. Buzby (<http://www.ers.usda.gov/publications/AgOutlook/aug2001/AO283c.pdf>).

Use of antimicrobial drugs (antibiotics and others) in livestock production has been surrounded by controversy since the practice began in the 1940s. At high levels, the drugs are used to cure or contain livestock diseases. At low levels, they are used to enhance feed efficiency and promote growth, fight infections not easily detectable without clinical examination, and prevent diseases. It is primarily the low-level use of these drugs—particularly for promotion of growth—that raises concerns about their role in the emergence of drug-resistant bacteria. For further information, see *Livestock Drugs: More Questions Than Answers?* by K. Mathews (<http://www.ers.usda.gov/publications/AgOutlook/sep2001/ao284g.pdf>).

Feeding low levels of antimicrobial drugs to livestock can affect food safety, human health, and livestock production costs and returns. The economics of antimicrobial resistance in livestock and the economic implications of banning the use of growth-enhancing antimicrobial drugs are explored in *Antimicrobial Drug Use and Veterinary Costs in U.S. Livestock Production* by K. Mathews (<http://www.ers.usda.gov/publications/aib766/>).

Characteristics and Production Costs of U.S. Cow-Calf Operations

Differences in regional conditions are the chief influence on variations in cow-calf production costs across the United States. Cow-calf operators in the West and Southern Plains have significant cost advantages over operators in other regions because, with a longer grazing season, their herds require less supplemental forage during the winter. The larger acreages of operations in the West and Southern Plains also can support more cows and enable economies of scale (spreading the fixed investment over more units of production). Because of the harsher climate, operations in the North Central region and Northern Plains spend significantly more to maintain their herds. For more information, see *Characteristics and Production Costs of U.S. Cow-Calf Operations* by Sara D. Short (<http://www.ers.usda.gov/publications/sb974-3/>). Additional information about beef cow replacement decisions can be found in *The Beef Cow Replacement Decision* by K. Mathews and Sara D. Short (*Journal of Agribusiness* 19,2(Fall 2001):191-211).

Confined Animal Production and Manure Nutrients

Census of Agriculture data were used to estimate manure nutrient production and the capacity of cropland and pastureland to assimilate nutrients. Most farms have adequate land on which it is physically feasible to apply the manure produced onfarm at agronomic rates. Even so, manure that is produced on operations that cannot fully apply it to their own land at agronomic rates accounts for 60 percent of the Nation's manure nitrogen and 70 percent of the manure phosphorus. In these cases, most counties with farms that produce "excess" nutrients have adequate

crop acres not associated with animal operations, but within the county, on which it is feasible to spread the manure at agronomic rates. For additional information, see *Confined Animal Production and Manure Nutrients* by Gollehon et al. (<http://www.ers.usda.gov/publications/aib771/>).

Changing Structure of Global Food Consumption and Trade

Higher incomes, urbanization, demographic shifts, improved transportation, and consumer perceptions regarding quality and safety are changing global food

consumption patterns. Shifts in food consumption have led to increased trade and changes in the composition of world agricultural trade. Given different diets, food expenditure and food budget responses to income and price changes vary between developing and developed countries. In developing countries, higher income results in increased demand for meat products, often leading to increased imports of livestock feed. For further information, see *Changing Structure of Global Food Consumption and Trade* by A. Regmi et al. (<http://www.ers.usda.gov/publications/wrs011/>).