

# Livestock, Dairy, and Poultry Outlook

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## Tightness in Beef Supplies to Persist

**NOTE:** Due to uncertainties as to the length of bans on trade in ruminants and ruminant products because of the discovery of BSE in the United States and Canada, forecasts for 2005 assume a continuation of policies currently in place among U.S. trading partners. It is assumed that the current delay in the implementation of the minimal-risk rule is temporary. Subsequent forecasts will reflect any announced changes.

**Beef:** Court injunctions and poor feeding conditions have resulted in even tighter-than-expected beef supplies and record first-quarter cattle prices. Improved weather conditions this spring and opening of the Canadian border later this year for importing cattle for placement on feed, and immediate slaughter under 30 months of age, will increase beef supplies. Once the bubble of cattle from Canada are assimilated, likely by mid-2006, the supply situation in both countries will return to near cyclical lows, but reflect a much improved balance in the North American industry. Beef demand and prices remain strong, but relatively lower prices for competing meats will force adjustments as end users turn to competing meats at more consistent supply levels as well as lower relative prices.

**Lamb:** Reduced first-quarter production and expected lower imports, point to lower first-quarter lamb consumption. Average retail prices for both domestic and imported lamb are expected to trend slightly upward in 2005.

**Dairy:** Commercial disappearance of dairy products in January posted very large increases from a year earlier, wrapping up what proved to be a very good autumn holiday season. The strong holiday seasonal movement reflected generally good economic and income conditions for most Americans, with both restaurant and home use showing

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Tables will be released on April 26, 2005.

The next newsletter release is May 19, 2005

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Approved by the World Agricultural Outlook Board.

substantial recovery. In addition, there appeared to be no significant carryover effect from the very high spring and summer prices. The holiday strength bodes well for 2005 dairy demand as well as helping to explain price buoyancy early in the year.

**Pork/Hogs:** The *Quarterly Hogs and Pigs* report for March 1, 2005, indicated that the U.S. hog sector continues to operate at a “steady state.” Commercial pork production is expected to be record-large this year at 20.8 billion pounds, with 51-52 percent live equivalent hog prices ranging between \$48-50 per hundredweight (cwt).

On April 6th the U.S. International Trade Commission (USITC) determined that the domestic hog industry is not materially injured, or threatened by material injury, by imported hogs and pigs from Canada. The practical effect of the ruling is that U.S. swine buyers can resume free importation of Canadian animals, unencumbered by dumping penalties imposed last October by the U.S. Department of Commerce (DOC). U.S. demand for slaughter hogs in particular is likely to increase in the absence of the dumping penalties.

**Poultry:** Broiler production is expected to grow by 3 percent in 2005 to 35.1 billion pounds. Higher exports will offset part of this increase, but consumption is expected to increase by 2 pounds, to over 86 pounds per capita on a retail weight basis. Broiler prices are expected to gradually strengthen throughout the year as relatively slow growth in production and lower stocks tighten supplies. With almost no growth in production and higher exports, turkey supplies are expected to be relatively tight. Prices for Eastern hens are expected to average between 69 and 72 cents per pound in 2005, slightly higher than last year.

### *Beef/Cattle Border Opening Uncertainty Continues*

Supply uncertainties due to the Canadian border court injunctions and poor feeding conditions pushed first-quarter cattle prices to a new record. On December 29, 2004 USDA released the Minimal Risk rule reopening the U.S. border to Canadian cattle under 30 months of age and beef from cattle over 30 months of age effective March 7. On February 9, the Department delayed the effective date for allowing imports of meat from animals 30 months and over.

<http://www.aphis.usda.gov/lpa/issues/bse/bse.html>

When court injunctions in early March further delayed implementation of the minimal-risk rule, prices rose sharply as end users competed for a less-than-expected supply of fed and cow beef. The cattle/beef sector continues to be buffeted by uncertainties on full implementation of the rule. The market expected trade to resume March 7 with cattle under 30 months of age and beef from cattle over 30 months of age moving into the United States. The present forecasts assume the border will remain open to boneless beef from cattle under 30 months of age and beginning in the summer quarter, open to live cattle under 30 months of age for placement into feedlots and then slaughter or for immediate slaughter. Just as the unexpectedly tight supplies now have resulted in price spikes, the market will come under downward price pressure as supplies increase and end users become more comfortable with forward supply expectations. Supplies will increase fairly sharply for the first 6 to 12 months following the border's reopening, but then supplies will again become cyclically tight in both countries.

### *Beef Supplies Remain Tight*

The market this past winter was complicated by poor weather conditions holding down feedlot gains and the court injunction. First-quarter production was down 2 percent from the low levels of a year ago and down almost 9 percent from first quarter 2003. Steer and heifer slaughter declined over 3 percent, while cow slaughter was down nearly 6 percent. Commercial slaughter weights were record high last fall, but are going to average about 3 pounds under the 2002 record of 758 pounds dressed weight during the first quarter. In both years, cow slaughter comprised 16.3 to 16.5 percent of commercial slaughter. Commercial dressed weights are up about 14 pounds from the low levels last year.

The female retention phase of the cattle cycle is holding down cow slaughter and feeder cattle supplies remain very tight with last years calf crop down nearly 1 percent from a year earlier and the lowest since 1951. With reduced cow slaughter and 3 percent more beef heifers expected to calve this year, the calf crop is expected to begin a cyclical rise, but the rise begins from decades- low levels which will continue to hold down beef supplies through at least 2007. The additional beef that enters the U.S. market when the border opens will be assimilated within a year of the border's fully opening. The United States will still be at the initial stages of herd expansion and Canadian reaction to expansion may be very guarded, at least for the first few years as producers rebuild their financial base and adjust to new trading rules. Both countries will have more feedlot and slaughter capacity than cattle, and cyclical firm adjustments due to low cattle inventories will continue as both sectors compete strongly for the available inventory.

Beef production in the second quarter is expected to rise from the low winter quarter levels as feeding conditions improve and fed cattle marketings rise. In addition, slaughter weights are expected to average well above those of a year ago, and likely above the 2002 record of 746 pounds. As the border reopens in the second half of the year, production is expected to rise 6 to 7 percent above the low year earlier levels. Most of the year-to-year increases due to the border's opening are expected to be worked through the market by mid 2006. USDA will release its 2006 forecasts in May.

### ***Prices Continue Record Pace***

While the record cattle prices are largely the result of unexpected supply tightness, beef demand remains strong and the end-user market has been forced to compete fiercely to meet forward commitments, particularly in the face of poor feeding conditions. Nebraska direct steers averaged \$89.09 per cwt in the first quarter, up nearly \$7 per cwt from a year earlier, and second only to the \$99.38 in fourth-quarter 2003 when supply adjustments were most stressing because of the Canadian border closing in May. Beef supplies will remain very tight and prices high until feeder cattle supplies increase either from Canada or cyclical expansion in the U.S. herd. Feeder cattle imports from Mexico continue fairly large, even as the Mexican cattle inventory continues to decline, due to the very strong U.S. prices. Prices for yearling feeder cattle at Oklahoma City averaged \$104.05 per cwt in the first quarter, a first quarter record but below the third quarter 2004 record.

Processing beef stocks have been particularly tight with the sharply reduced cow slaughter. The market expected that, under the Minimal Risk Rule announced at the beginning of the year, imports of cow beef from Canada would increase substantially when the market reopened on March 7. However, USDA canceled that part of the minimal risk rule allowing imports of beef from cattle over 30 months of age. January and February imports were down sharply as the market anticipated larger supplies of cow beef coming in from Canada later in the quarter at lower prices than the imports, primarily from Australia, New Zealand, and Uruguay. The delay in implementation of the rule for beef from cattle over 30 months pushed domestic cow beef prices to a first quarter record \$54.18 per cwt and only a couple dollars off the third quarter 2004 record. Cow beef supplies will remain very tight, and demand for imported beef will be very strong. Australia and New Zealand are exporting more product into Asia since U.S. beef has been banned due to BSE. Consequently, the U.S. processing beef market must compete with these other countries for the tight world supply.

For the year, fed cattle prices are expected to average slightly above 2004's \$84.75 per cwt, with prices averaging in the upper \$80s per cwt in the first half of the year and the lower \$80s in the second half. Similarly, feeder cattle prices are expected to reach the second highest average to 2004's record \$104.76 per cwt. Utility cow prices will remain on a record-setting pace with cyclically low cow slaughter and very tight world beef supplies with the U.S. and Canada both banned from the export market. Utility cow prices are expected to average in the mid-\$50s.

### ***Retail Prices Rise With Tight Supplies***

Retail prices for Choice beef are again rising. Prices averaged about \$408 at the beginning of the year and rose to \$4.13 in February. As the supply tightness continues, retail prices are likely to rise seasonally through spring. In 2001 and 2002 retail beef prices were about 25 percent above pork prices; in 2003, with the ban on Canadian beef, the ratio moved up to 40 percent. In 2004 and so far in 2005 the ratio has risen to 45 percent. The high beef price and uncertain supply situation is increasingly making both pork and broiler meat relatively attractive. Beef demand and prices remain strong, but relatively lower prices for competing meats will force adjustments as end users turn to competing meats at more consistent supply levels as well as lower relative prices.

### ***World Beef Trade Bans Disrupt Markets***

The World Organization for Animal Health (OIE) code is a guide for international trade. The OIE will be taking up the scientifically based Minimum-Risk rule in May as the guide for international beef trade. As world markets are reopened a major realignment will occur, but the fact remains that world beef supplies will remain very tight. Although the United States and Canada eagerly await reopening of Asian markets, reclaiming these markets, even with high-quality fed beef, will not occur very rapidly with prices remaining near record levels. High-quality fed beef prices will remain relatively strong in comparison to the lower priced short-fed Australian beef. U.S. prices will remain very strong until herd expansion increases beef supplies from the current very low levels.

## Sheep and Lamb

### *First-Quarter Lamb and Mutton Production Lower; Prices Remain Fairly Strong*

In the first quarter of 2005, commercial production of lamb and mutton totaled 49 million pounds, nearly 8 percent lower than the same period in 2004, although the religious holiday of Easter came in the first quarter. Typically, lamb demand exhibits some seasonality and is highest during this religious holiday. The expectation that the boost in demand from this holiday would push first-quarter production higher did not materialize. Improved weather conditions and the continued payments from the Ewe-Lamb Replacement and Retention Program may have contributed to producers' holding back animals for herd rebuilding. Second quarter commercial lamb and mutton production is expected to be 48 million pounds. It is typical for demand to fall in the second and third quarters each year as the consumers of spring lamb shift to other meats for the rest of the year.

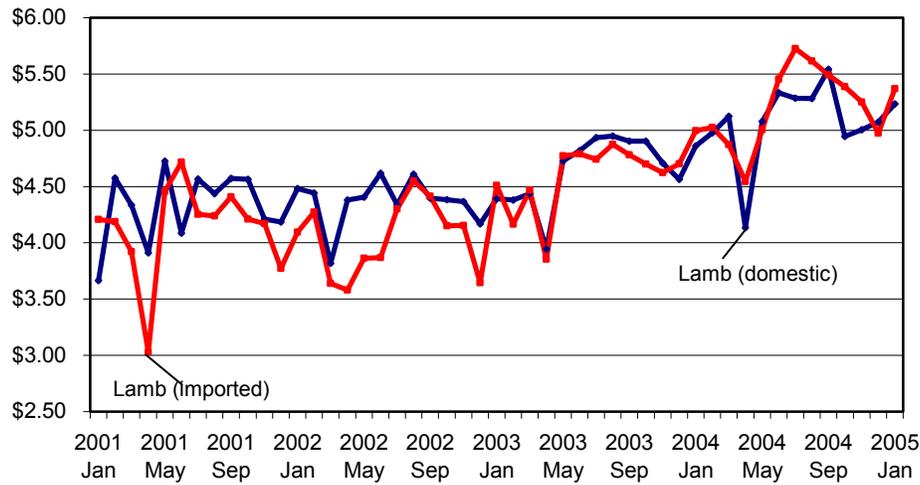
As seasonal demand softens, so too will slaughter lamb prices. Choice slaughter lamb prices at San Angelo remained fairly strong throughout 2004, averaging \$96.69 per cwt and strengthened even further early in the first quarter 2005. First-quarter Choice slaughter lamb prices at San Angelo averaged \$106.10 per cwt. However, signs of weakening were seen at the end of March. Weaker prices are expected in the second quarter due to lower demand, but lower supplies caused by retention of ewe lambs and continued herd rebuilding could result in prices in the upper \$90s per cwt. Second-quarter Choice slaughter lamb prices at San Angelo are forecast at \$97-\$99 per cwt.

Imports of lamb and mutton continue to offset domestic production declines. However, January 2005 lamb and mutton imports were much lower than expected, given lower domestic production. January imports were 8.03 million pounds, 64 percent below the same period in 2004. Imports for the first quarter are forecast at 48 million pounds, down about 23 percent from the first-quarter 2004. With first quarter production down and imports expected down, this would suggest lower total lamb consumption for the 2005 first quarter.

Since January 2001 the average retail price of both domestic and imported lamb has trended upwards, and it is expected to continue a slight upward trend in 2005. Prior to January 2003, imported lamb retail prices were, on average, slightly lower than domestic lamb retail prices. Since January 2003, the retail price of imported lamb has, on average, remained higher than the domestic retail price of all lamb. A comparison of primary cuts shows that the retail price of top-selling imported lamb is slightly higher than that of top-selling domestic lamb cuts. On average, the retail price of selected domestic lamb cuts are trending upward and are expected to continue that trend for 2005 as per capita consumption remains fairly stable in the face of tight supplies

**Average retail price of domestic versus imported lamb, Jan. 2001 to Jan. 2005**

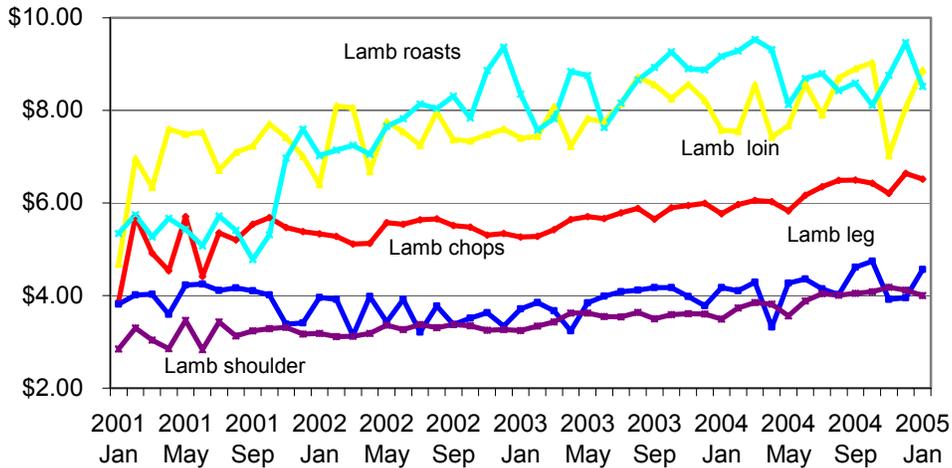
\$ per pound



Source: USDA, Economic Research Service and Livestock Marketing Information Center.

**Average retail price of selected domestic lamb cuts, Jan. 2001 to Jan. 2005**

\$ per pound



Source: USDA, Economic Research Service and Livestock Marketing Information Center.

## Dairy

### *Holiday Dairy Sales Memorable*

Commercial disappearance of dairy products in January posted very large increases from a year earlier, wrapping up what proved to be a very good autumn holiday season. For the October-January period, use of all dairy products (milk equivalent, milkfat basis) rose 2.3 percent from the fairly strong levels of a year earlier. Butter use rose about 2 percent, while sales of American varieties of cheese jumped more than 7 percent and other varieties almost 3 percent. Boosted by large commercial exports, commercial disappearance of nonfat dry milk jumped 39 percent.

The pattern was remarkably uniform for sales of total milkfat, butter, and the two cheese categories. October use was relatively weak as buyers delayed normal holiday buying in hopes that butter and cheese prices would decrease further. Sales surged in November as orders were strong and prices moved higher. Wholesale movement was not as strong in December, but this apparently reflected a lack of supplies rather than a lack of desire to buy. Pipeline holdings at yearend were very tight, and the huge increases in January disappearance were partially the result of rebuilding these stocks.

The strong holiday season movement reflected generally good economic and income conditions for most Americans, with both restaurant and home use showing substantial recovery. In addition, there appeared to be no significant carryover effect from the very high spring and summer prices. The holiday strength bodes well for 2005 dairy demand as well as helping to explain price buoyancy early in the year.

Preliminary information indicates that cheese use remained quite strong in February, particularly for other cheese. Total sales, however, were pulled down slightly by a drop in butter. Analysis of butter disappearance is particularly complex this year because of the quite early western Easter, normal timing of Passover, and quite late eastern Easter. Nonfat dry milk sales continued to soar.

### *Quarterly Hogs and Pigs Report Signals “Steady State” for Now*

The *Quarterly Hogs and Pigs* report-- released by USDA on March 24, 2005-- showed small year-over-year changes to inventories, pig crops, and farrowing intentions. The March 1 inventory of All Hogs and Pigs increased 1 percent over March 1, 2004. The inventory of animals kept for breeding was unchanged from a year ago, despite recent strong producer returns that have historically provided sufficient incentive for the industry to begin to expand breeding herd numbers. The December-February pig crop was about 2-percent higher than the same quarter last year. Of that nearly 2 percent increase, roughly half is attributable to 1 percent higher year-over-year farrowings, while a 1-percent increase in pigs-per-litter accounts for the rest. Taken together the report implies that the U.S. hog sector remains in a “steady state,” characterized by small, unremarkable changes.

Despite strong hog prices, the report indicates that producers are cautious about pushing production numbers higher. In addition to an unchanged breeding herd inventory, producer caution is reflected in the report’s farrowing intentions. For the March-May quarter, producers indicated unchanged year-over-year (second) farrowing intentions. Moreover, first intentions for June-August 2005 indicate that producers intend to farrow 1 percent fewer sows and gilts than in the same quarter last year. Farrowing intentions reported in the March report point to slightly higher commercial pork production expectations of 5.6 billion pounds in the fourth quarter of 2005, and perhaps slightly lower year-over-year production in the following quarter.

Despite a slightly smaller first quarter slaughter than a year ago, commercial pork production-- at 5.13 billion pounds-- is expected to be only fractionally smaller than first-quarter 2004. Less slaughter is offset by higher expected dressed weights. Expected first quarter dressed weights, at 201 pounds, were 2 pounds higher than the first quarter of last year. The first-quarter 2005 price of 51-52 percent live equivalent hogs was \$51.92, 6 percent higher than a year ago. Pork production for 2005 is expected to be record-large at 20.8 billion pounds, or slightly more than 1 percent above 2004. Production increases this year will come from slightly higher slaughter--less than 1-percent above 2004--and one additional pound to dressed weights, taking the average to slightly more than 199 pounds per head. Live hog prices this year are expected to average between \$48 and \$50 per cwt, implying continued strong returns for producers.

First-quarter retail pork prices averaged in the low \$2.80s per pound, and are expected to maintain roughly that level for 2005. The current level of retail pork prices are vulnerable however, to lower expected beef and poultry prices, and to lower discretionary income levels that may result from higher gasoline prices. Retail demand and restaurant consumption of meats tend to be sensitive to relative price changes.

### *USITC Finds U.S. Hog Industry Not Injured by Canadian Hog/Pig Imports*

On April 6, the U.S. International Trade Commission (USITC) determined that the domestic hog industry is not materially injured, or threatened by material injury, by

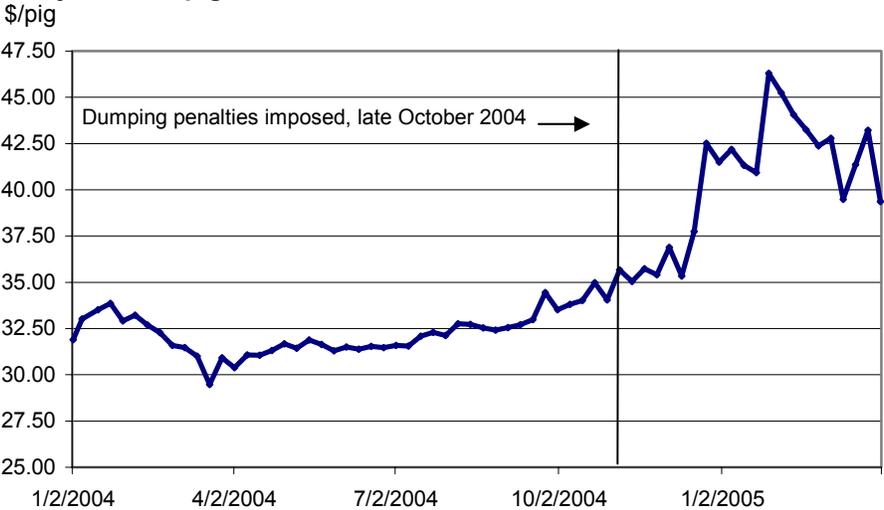
imported hogs and pigs from Canada. The practical effect of the USITC ruling is that U.S. swine buyers can resume free importation of Canadian animals, unencumbered by dumping penalties imposed last October by the U.S. Department of Commerce. Bonds and cash deposits in the amount of the dumping penalties posted by buyers and sellers of Canadian hogs since last October will be refunded.

***Effects of the Antidumping Penalties Were Pronounced***

Data detailing U.S. live swine imports from Canada published weekly by USDA (WA\_LS637, Canadian Live Animal Imports into the U.S. by Destination, and WA\_LS 635, Canadian Live Animal Imports by State of Entry) show that average weekly live swine imports were lower than before the antidumping penalties were imposed in late October 2004. The data show that total average weekly imports were about 165,000 head from January through October 2004. From November 2004 through March 26, 2005, the average number of imported Canadian swine dropped to about 150,000 head. Through March 26, 2005, the total number of swine imported from Canada was 15 percent lower than the same period in 2004. U.S. prices for early-weaned pigs also appeared to reflect lower animal supplies.

The dumping penalties also appeared to have affected U.S. demand for specific categories of animals. Since dumping penalties are imposed on a percent-of-value basis, the incidence of the penalties appeared to fall more heavily on the (higher valued) slaughter hogs. For the period in which the dumping penalties were in place, imports of slaughter hogs were more than 19 percent lower than during the same period last year. Feeder pig imports were off by about 15 percent. While many factors affect the supply and demand for imported Canadian swine, dumping penalties as high as 18.87 percent likely made Canadian animals less attractive to U.S. buyers, all other factors equal.

**Estimated weekly weighted average delivered price, early-weaned pigs, 10 lb basis**



Source: USDA Market News

***Trade Resumption Likely To Result in Higher Live Import Numbers, a Greater Proportion of Slaughter Hogs, but Lower U.S. Pork Imports***

In the absence of dumping penalties, U.S. swine buyers are likely to import more Canadian animals, and slaughter hogs will comprise a greater proportion of swine imports than when the dumping penalties were in place. U.S. pork imports are also likely to decline somewhat, as live trade normalizes. In the absence of the dumping penalties, the United States is likely to import 13 percent less pork products than under a scenario when live trade penalties were in place. The United States is expected to import about 1 billion pounds of pork this year.

### ***Broiler Production Higher and Exports Up***

Broiler production in the first quarter of 2005 is estimated at 8.45 billion pounds, up 3.1 percent from the previous year. The increase is due in equal measure to an expected increase in the number of birds slaughtered and an increase in the average liveweight of birds. Exports in the first quarter are expected to total 1.25 billion pounds, a 22-percent increase from the previous year. The large year-over-year increase is attributable to bans by a number of countries on U.S. poultry products in the first quarter of 2004 due to avian influenza (AI) outbreaks.

Normally with only moderate increases in production and growth in exports and lower stock levels, prices of broiler products would be expected to strengthen. Prices for whole birds averaged 71.9 cents per pound in the first quarter, down from the previous year, but up over 5 percent from the fourth quarter of 2004. Prices for whole broilers are expected to gradually strengthen during 2005, but not until the fourth quarter will they exceed last year's levels.

### ***Turkey Estimates Reduced***

The first quarter 2005 estimate for turkey production was reduced by 15 million pounds to 1.31 billion pounds, about even with production in the first quarter of 2004. Over the first 2 months of 2005, the number of turkeys slaughtered was down by 4 percent. This decrease in numbers has been offset by a 4-percent increase in the average liveweight to almost 29 pounds per bird. The turkey production estimate has also been reduced for the remainder of 2005, with the total for the year at 5.49 million pounds, down 90 million pounds from the previous estimate. The reduction in the number of turkeys being slaughtered is a reflection of the amount of turkey poults being placed for growout, which has been lower on a year-over-year basis for a number of months. Turkey exports over the first half of 2005 are expected to show considerable growth compared with the previous year. Like broilers, turkey exports in the first half of 2004 were held down by the bans on U.S. exports due to AI outbreaks.

## Special Section: Exchange Rates

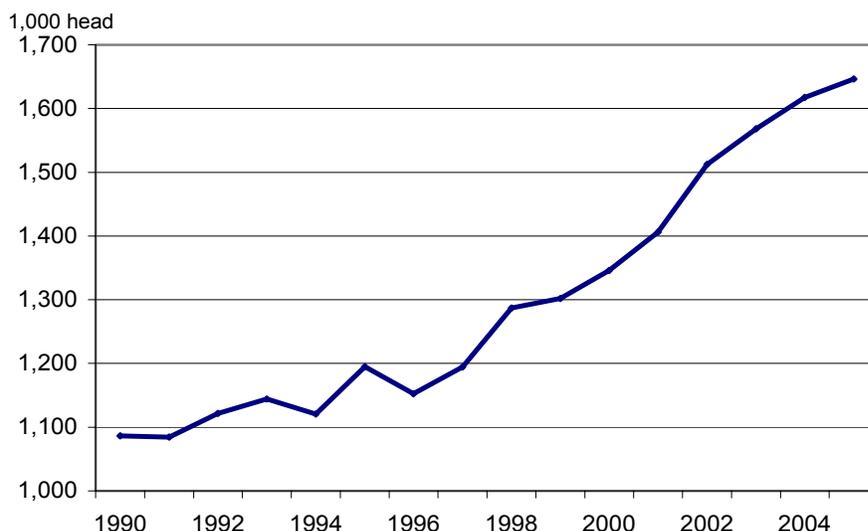
*“Exchange Rate Changes as a Factor in Swine Breeding Herd Changes in Canada” is the first in a series of special sections titled, “Exchange Rate Effects and U.S. Trade in Animal Products and Livestock.”* International trade in animal products and livestock is increasingly important to U.S. red meat, dairy, and poultry sectors. This series of special sections will examine how changes in currency prices--exchange rates--directly affect U.S. markets.

### *Exchange Rate Changes as a Factor in Swine Breeding Herd Changes in Canada*

The ERS Electronic Outlook Report, “Market Integration in the North American Hog Industries” (<http://www.ers.usda.gov/publications/ldp/NOV04/ldpm12501/>) identified the U.S.-Canada exchange rate as one of the key variables that induced the development of the U.S. demand for live hogs and pigs from Canada. From November 1996 to January 2002, the value of the U.S. dollar appreciated almost 20 percent relative to the Canadian dollar. Over that same period, the size of the Canadian breeding herd expanded 26 percent, from 1.2 million head to 1.5 million head.

Since January 2002, the U.S. dollar has been depreciating in value against the Canadian dollar. While the price of a Canadian dollar was \$.63 in January 2002, a Canadian dollar cost 32 percent more, or \$.82 in January 2005. What has been the effect of U.S. dollar depreciation on the expansion of Canada’s breeding herd? At first glance, it is not apparent from the figure below that U.S. dollar depreciation has had any effect on the size of the Canadian breeding herd. Indeed, breeding numbers increased 135,000 head, or 9 percent, from January 2002 to January 2005. Looking below the surface however--at quarter-to-quarter percent changes--shows that the rate of expansion of the Canadian breeding herd has slowed down, suggesting that the U.S. dollar depreciation may be one of the factors in helping to explain why.

**January 1 inventory of breeding swine: Canada**



Source: Statistics Canada

Last year, buyers in the United States imported over 8 million live hogs and pigs from Canada. There are numerous ways in which U.S. buyers obtain live swine from Canadian sellers; via many varieties of contract arrangements, through spot markets, by using brokers, etc. Regardless of the specific characteristics of the sale and transfer of Canadian hogs and pigs to U.S. buyers, one aspect common to each transaction, is that at some point, an exchange between national currencies takes place. A change in the price at which an exchange of currencies takes place affects the quantities of Canadian hogs and pigs supplied by Canadian producers, and demanded by U.S. buyers. Exchange rates--effectively the price of foreign money--play a role in every sale or purchase of goods between countries that have different currencies.

When countries with different currencies engage in goods trade, two transactions are actually taking place: an exchange of goods and an exchange of currencies. The premiums and discounts associated with the exchange rate transactions can affect the overall profitability of companies engaged in international trade. Because industries make investment decisions based on profitability, it can be said that exchange rate changes can affect investment decisions.

Below, the linkage between exchange rates and investment decisions is briefly examined, and is followed by an application to U.S.-Canada hog trade, in order to explain how exchange rate changes may help to explain the expansionary path of the Canadian breeding herd in recent years.

***Exchange Rates as Components of International Transactions:  
A Textbook Example***

Imagine a situation where Country A sells goods to Country B at a time when Country B's currency is gaining value against the currency of Country A. That is, the price of Country B's money, in terms of Country A's money is increasing. Country A must pay more units of its money to buy one unit of Country B's money.

Country A sells goods to B--the first transaction--and is paid for those goods in B's currency. Goods sellers from A take B's currency acquired in the goods transaction, and sell it in the currency market--the second transaction--in exchange for units of their own national currency, currency A.

Suppose at the time of the goods transaction, the exchange rate between A (the goods-selling country) and B (the buying country) is 1:1; it takes one unit of A's money to buy one unit of B's money. Then suppose that at the time of the second transaction--the currency exchange--B's currency appreciates 10 percent against A's currency.

When goods sellers from A make their currency conversion--sell B's currency, and buy Country A currency--they end up with 10 percent more A currency. Why? Because the price--the exchange rate--of A's currency in terms of B's has increased. So apart from any gain or loss from goods component of this transaction, there is a gain--a premium--from the currency exchange component of the transaction. The seller of goods into a foreign market where the currency is appreciating typically gains on the currency exchange component of the transaction.

The situation reverses when Country A's money gains value against B's; there is typically a discount on the currency transaction component of an international transaction, when selling goods into a country where the value--the price--of the currency is falling.

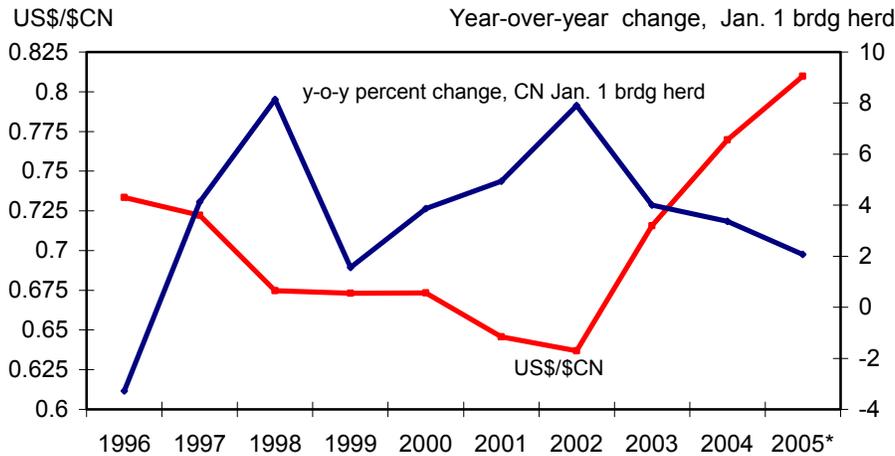
***Applying the Textbook Example Shows Why Canadian Hog and Pig Producers Benefit When the U.S. Dollar is Strong***

The sale of Canadian hogs and feeder pigs to U.S. buyers at a time when the U.S. dollar is appreciating against the Canadian dollar generates an exchange rate premium when U.S. dollars from the sale are converted to Canadian dollars. Such premiums were an important part of transactions between sellers of Canadian hogs and feeder pigs, and U.S. buyers between late 1996 and early 2002. When the U.S. dollar appreciates against Canada's currency--as it did fairly consistently between 1997 and 2001--the exchange rate premium captured by Canadian hog/feeder pig sellers enhances the returns of the Canadian hog/feeder pig industry. Enhanced returns often create incentives to expand production. Exchange rate dynamics are likely one factor that helps to explain the rapid expansion of the Canadian hog/feeder pig industry.

***Some Empirical Evidence Linking Changes in Exchange Rates and Breeding Herd Expansion in Canada***

The linkage between exchange rate changes and expansion of the Canadian breeding herd is illustrated in the figure below, which plots the 1996-2005 US-CN exchange rate on the left axis, and the year-over-year percent change in the Canadian swine breeding herd on the right axis. Between 1996 and 1998, the U.S. price of a Canadian dollar dropped from \$.73 to \$.67. That means every U.S. dollar earned in the United States by Canadian producers selling hogs/feeder pigs to U.S. buyers, converted into 1.37 \$CN (Canadian dollars) in 1996, and 1.48 \$CN in 1998. The 9-percent appreciation of the U.S. dollar corresponded with a 12-percent increase in the Canadian breeding herd over the same period.

**Relationship between Canadian breeding herd expansion and U.S.-Canada exchange rate, 1996-2005**



Source: Statistics Canada, Federal Reserve Bank of N.Y

In 1999 and 2000, the U.S. dollar appreciated slightly relative to 1998, while the Canadian breeding herd expansion rate slowed dramatically in 1999--likely due to the North American collapse of hog prices in 1998--and rebounded almost 4 percent in 2000. Between 2000 and 2002, the U.S. dollar appreciation and the year-over-year expansion of the Canadian breeding herd continued. In 2002, the dollar appreciation peaked, as did the expansion rate of Canada's breeding herd.

Since 2002, the U.S. dollar has depreciated against the Canadian dollar. Consequently, sellers of Canadian hogs/feeder pigs in the U.S. have incurred a discount when converting U.S. dollars to Canadian dollars. Canadian producers' returns are reduced by the exchange rate discount. In figure 2, U.S. dollar depreciation corresponds with a declining rate of growth of the Canadian breeding herd. This relationship is theoretically consistent because, over time, the currency conversion discount reduces industry profitability and returns, diminishes the incentive to increase breeding numbers, and slows the rate of herd expansion.

The relationship between the change of the Canadian breeding herd and the U.S.-Canadian exchange rate can be expressed in a simple single equation model, as follows:

$$Y = \beta_0 + \beta_1 X = 20.9 - 23.4X$$

(5.7)    (7.99)

$$R^2 = .68$$

where,

- Y = Year-over-year change in Canadian swine breeding herd
- $\beta_0$  = Constant term
- $\beta_1$  = The year-over-year percent change in Canadian swine breeding herd brought about when the U.S.-Canada exchange rate changes
- X=U.S.-Canada exchange rate ( US\$ / \$CN )

The relationship estimated here between the US\$/SCN exchange rate and changes in the Canadian breeding herd turns out to be a negative one. That is, when the U.S.-Canada exchange rate increases (i.e., when the U.S. dollar depreciates), the breeding herd expansion slows down. The R<sup>2</sup> term tells us that the exchange rate explains 68 percent of year-to-year changes in the Canadian breeding herd. The variables that may explain the other 32 percent of Canadian breeding herd changes include all of the other variables and factors that together affect Canadian producers' expansion decisions: hog and feeder pig prices, all costs of production, macroeconomic factors such as interest rates, GDP growth, policy variables including trade barriers, regulatory costs, etc.

**Conclusions**

When U.S. buyers import live swine from Canada, two transactions are actually taking place: an exchange of goods (feeder pigs and slaughter hogs) and an exchange of currencies (U.S. dollars and Canadian dollars). The premiums and discounts associated with the exchange rate transaction can affect producer returns

on both sides of the border. Because returns and profitability are among the factors that producers consider in making investment decisions, exchange rate changes can affect breeding herd expansion.

Many economists are forecasting continued depreciation of the U.S. dollar in terms of the currencies of its trading partners. Continued depreciation of the value of the U.S. dollar relative to the Canadian dollar may serve to function as a brake on the rate of expansion of breeding herd numbers in Canada

## Contacts and Links

### Contact Information

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### Data

Colorado State University's Livestock Marketing Information Center (<http://www.lmic.info>) now houses the retail scanner prices for meat database (<http://www.lmic.info/meatscanner/meatscanner.shtml>), including standard tables, the searchable database, and documentation. The raw data underlying the database are from supermarkets across the United States that account for about 20 percent of supermarket sales. Erica Rosa, 720-544-2941.

### Recent Report

"Market Integration in the North American Hog Industries"  
<http://www.ers.usda.gov/publications/ldp/NOV04/ldpm12501/> reports that about 8 percent of the hogs slaughtered in the United States in 2004 will originate in Canada, many more than 10 years ago. Canadian hogs have flowed into the United States in response to significant structural changes in the U.S. pork industry, policy changes in Canada, and a strong U.S./Canadian dollar exchange rate.

### Related Websites

Animal Production and Marketing Issues, <http://www.ers.usda.gov/briefing/AnimalProducts/>  
Cattle, <http://www.ers.usda.gov/briefing/cattle/>  
Dairy, <http://www.ers.usda.gov/briefing/dairy/>  
Hogs, <http://www.ers.usda.gov/briefing/hogs/>  
Poultry and Eggs, <http://www.ers.usda.gov/briefing/poultry/>  
WASDE, <http://www.usda.gov/oce/waob/wasde/latest.pdf>

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## Red meat and poultry forecasts

	2001	2002	2003	2004				2005					
	Annual	Annual	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual
<b>Production, million lb</b>													
Beef	26,107	27,090	26,238	5,838	6,253	6,360	6,097	24,548	5,735	6,525	6,875	6,400	25,535
Pork	19,138	19,664	19,945	5,130	4,897	5,047	5,435	20,509	5,125	4,975	5,100	5,560	20,760
Lamb and mutton	223	219	199	53	46	46	50	195	49	48	48	52	197
Broilers	31,266	32,240	32,749	8,195	8,492	8,839	8,537	34,063	8,450	8,775	9,075	8,825	35,125
Turkeys	5,562	5,713	5,650	1,309	1,366	1,390	1,389	5,454	1,310	1,375	1,375	1,425	5,485
Total red meat & poultry	83,006	85,669	85,476	20,687	21,220	21,858	21,676	85,441	20,828	21,867	22,655	22,434	87,784
Table eggs, mil. doz.	6,078	6,190	6,207	1,556	1,574	1,598	1,637	6,365	1,585	1,610	1,615	1,645	6,455
<b>Per capita consumption, retail lb 1/</b>													
Beef	66.2	67.6	64.9	16.0	16.9	16.9	16.3	66.1	15.8	17.4	18.0	16.8	68.0
Pork	50.2	51.5	51.8	13.0	12.2	12.7	13.4	51.3	12.4	12.1	12.6	13.3	50.4
Lamb and mutton	1.1	1.2	1.2	0.3	0.3	0.2	0.3	1.1	0.3	0.3	0.3	0.3	1.2
Broilers	76.6	80.5	81.6	20.8	21.2	21.9	20.4	84.3	20.9	21.4	22.4	21.5	86.2
Turkeys	17.5	17.7	17.4	3.6	4.0	4.5	5.0	17.1	3.6	3.8	4.0	5.3	16.7
Total red meat & poultry	213.6	220.5	218.9	54.1	54.8	56.6	55.9	221.4	53.4	55.4	57.6	57.6	224.0
Eggs, number	252.7	255.5	254.7	63.7	63.9	64.1	65.5	257.2	63.1	63.9	63.9	65.2	256.1
<b>Market prices</b>													
Choice steers, Neb., \$/cwt	72.71	67.04	84.69	82.16	88.15	83.58	85.09	84.75	89.09	86-90	78-84	79-85	83-87
Feeder steers, Ok City, \$/cwt	88.20	80.04	89.85	87.98	104.58	116.27	110.19	104.76	104.05	99-103	89-95	91-97	96-100
Boning utility cows, S. Falls, \$/cwt	44.39	39.23	46.62	47.50	54.86	56.25	50.78	52.35	54.18	55-57	52-56	51-55	53-55
Choice slaughter lambs, San Angelo, \$/cwt	72.04	72.31	91.98	100.62	97.06	93.62	95.44	96.69	106.10	96-100	94-100	95-101	98-102
Barrows & gilts, N. base, i.e. \$/cwt	45.81	34.92	39.45	44.18	54.91	56.58	54.35	52.51	51.95	52-54	46-50	40-44	48-50
Broilers, 12 City, cents/lb	59.10	55.60	62.00	73.20	79.30	75.70	68.30	74.10	71.9	72-74	71-77	71-77	71-75
Turkeys, Eastern, cents/lb	66.30	64.50	62.10	62.10	66.60	73.10	77.10	69.70	65.90	68-70	69-75	73-79	69-72
Eggs, New York, cents/doz.	67.20	67.10	87.90	114.90	79.70	66.20	68.00	82.20	64.5	61-63	63-67	67-73	64-67
<b>U.S. trade, million lb</b>													
Beef & veal exports	2,269	2,447	2,518	36	120	138	167	461	135	165	180	150	630
Beef & veal imports	3,164	3,218	3,006	873	929	940	937	3,679	875	1,015	950	900	3,740
Lamb and mutton imports	146	162	168	62	47	34	38	181	48	45	42	45	180
Pork exports	1,560	1,611	1,717	523	546	486	624	2,179	615	635	580	700	2,530
Pork imports	951	1,070	1,185	275	265	291	268	1,099	270	250	270	250	1,040
Broiler exports	5,555	4,807	4,920	1,024	1,008	1,250	1,486	4,768	1,250	1,260	1,245	1,270	5,025
Turkey exports	487	439	484	83	93	134	133	443	120	120	130	140	510

1/ Per capita meat and egg consumption data are revised, incorporating a new population series from the Commerce Department's Bureau of Economic Analysis based on the 2000 Census.

Source: World Agricultural Supply and Demand Estimates and Supporting Materials.

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Published in Livestock, Dairy, and Poultry Outlook, <http://www.ers.usda.gov/publications/lpd/>

## Economic Indicator Forecasts

	2003		2004					2005				
	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual
<b>GDP, chain wtd (bil. 2000 dol.)</b>	10,599	10,381	10,709	10,778	10,883	10,976	10,837	11,076	11,176	11,268	11,362	11,226
<b>CPI-U, annual rate (pct.)</b>	0.9	1.9	3.6	4.7	1.9	3.4	3.4	2.2	2.2	2.2	2.3	2.3
<b>Unemployment (pct.)</b>	5.9	6.0	5.6	5.6	5.4	5.4	5.5	5.3	5.2	5.2	5.1	5.2
<b>Interest (pct.)</b>												
3-month Treasury bill	0.9	1.0	0.9	1.1	1.5	2.0	1.4	2.5	2.9	3.2	3.5	3.0
10-year Treasury bond yield	4.3	4.0	4.0	4.6	4.3	4.2	4.3	4.3	4.5	4.7	4.9	4.6

Source: Survey of Professional Forecasters, Philadelphia Federal Reserve Bank, February 2005.

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Published in Livestock, Dairy, and Poultry Outlook, <http://www.ers.usda.gov/publications/ldp>

## Dairy Forecasts

	2003		2004					2005				
	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual
Milk cows (thous.)	9,011	9,083	8,993	9,001	9,027	9,019	9,010	8,980	8,960	8,945	8,940	8,955
Milk per cow (pounds)	4,611	18,761	4,755	4,869	4,679	4,655	18,958	4,815	4,985	4,780	4,790	19,370
<b>Milk production (bil. pounds)</b>	41.6	170.4	42.8	43.8	42.2	42.0	170.8	43.2	44.7	42.8	42.8	173.5
<b>Commercial use (bil. pounds)</b>												
milkfat basis	45.3	174.7	42.0	43.8	44.6	45.8	176.2	42.6	43.9	45.1	45.9	177.4
skim solids basis	42.0	166.3	42.6	43.2	43.4	44.3	173.5	44.3	44.3	44.4	44.7	177.7
<b>Net removals (bil. pounds)</b>												
milkfat basis	0.0	1.2	-0.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
skim solids basis	0.7	8.1	0.8	0.1	0.4	0.0	1.3	-0.4	-0.1	0.0	0.1	-0.4
<b>Prices (dol./cwt)</b>												
All milk 1/	14.40	12.52	14.07	18.60	15.47	16.00	16.03	15.67	14.40	14.05	14.90	14.75
									-14.80	-14.75	-15.90	-15.25
Class III	13.24	11.42	12.66	19.31	14.54	15.06	15.39	14.31	13.55	13.15	13.30	13.60
									-13.95	-13.85	-14.30	-14.10
Class IV	10.33	10.00	12.43	14.26	12.92	13.19	13.20	12.64	12.15	12.15	12.15	12.30
									-12.65	-12.95	-13.25	-12.90

1/ Simple averages of monthly prices. May not match reported annual averages.

Source: World Agricultural Supply and Demand Estimates and supporting materials.

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