

Commodity Spotlight



Olga Liefer

From Grains To Meat: New Focus For Russian Ag Imports

Russia, formerly one of the world's largest grain importers, is now the second-largest meat importer in the world and no longer a major grain importer. The 1991 breakup of the USSR and the subsequent introduction of economic reforms and agricultural restructuring have resulted in sharp changes in both the scale and mix of Russia's food imports. As Russia has moved from a centrally planned economy toward a market-driven one, direct meat imports have replaced massive grain imports that were supplying an overexpanded, inefficient, and highly subsidized livestock sector.

In terms of dependence on foreign markets for all agricultural products combined, the overall share (in value terms) of total Russian imports has changed little from the period when Russia relied on the West for massive grain and soy product imports. Prior to reforms, meat (red meat

and poultry) made up about 1 percent of total imports and grain 4 percent. In 1996, the shares are reversed, with meat estimated at about 4 percent of Russia's total imports, and grain about 1 percent.

For the U.S., the changes in Russia's agricultural imports have meant about a 35-percent drop in the value of agricultural exports to Russia from an estimated \$2-billion total in 1991. Moreover, the makeup of U.S. exports has shifted from predominantly grain and soy products, which comprised over 90 percent of total agricultural sales in 1991, to mainly livestock products, which in 1996 accounted for over 75 percent of the total.

The short- to medium-term outlook for U.S. agricultural trade with Russia clearly hinges on prospects for continued meat imports by Russia—and therefore, on the near-term performance of its livestock sector and its ability to compete with imports. In the longer term, as Russian livestock output begins to recover, export opportunities for U.S. soy meal and feed grains may show growth again.

Since economic reforms began, Russia's livestock sector has shrunk by over 40 percent. Despite some recent indications that productivity in the livestock sector is stabilizing, further contraction of inventories and production is expected over the next 2-3 years as the domestic industry strives to lower costs and raise competitiveness. At the same time, Russian per capita meat consumption, which has dropped markedly since reforms were initiated, has begun to level off.

Until the decline in Russia's livestock sector bottoms out and recovery takes off, U.S. meat exports to the region are expected to remain at the current level of about \$1 billion. However, if Russia were to significantly raise trade barriers in the name of food security or other rationales, what is projected as a strong market in the near term could very quickly recede. The resultant contraction in U.S. exports to the region could have particularly significant repercussions in the U.S. poultry industry.

Price-Cost Squeeze Contracts Livestock Sector

By the end of 1996, Russia's animal inventories and meat production were both down for the seventh straight year. Since 1991, the year of the Soviet Union's breakup, total inventories of cattle have decreased by nearly 40 percent (with milk cows down almost 25 percent), hogs by almost 50 percent, and poultry by nearly 45 percent.

As a consequence, Russia has experienced a sharp decline in production of all types of meat. Since 1991, total meat output has dropped almost 45 percent. The decline in production of poultry meat has been the most severe, at nearly 55 percent, followed by pork at about 45 percent, and beef at about 35 percent. After output for the three types of meat each dropped by over 10 percent in 1995, the declines in 1996 are estimated at 8-9 percent.

Steep rises in production costs have been the main reason for the drop in Russian meat production. Russia's economic reform, introduced in 1992, liberalized prices and cut producer and consumer subsidies. As a result, prices throughout the economy jumped to better reflect real costs of production. The two main factors affecting agricultural producer costs—input prices and input productivity—both changed for the worse from the producer's standpoint.

For the livestock sector, price liberalization resulted in *worsening terms of trade*—i.e., the prices agricultural producers pay for inputs (such as feed, energy, and labor) have risen faster than prices received for their output. For example, from 1991 to 1995, farmgate prices for poultry and hogs rose only about 75 percent as much as prices for mixed feed (feed is the main input and cost component in meat production).

The deteriorating terms of trade reflect that under the old Soviet regime, the livestock sector was subsidized not only through direct financial transfers from the government, but also indirectly through the price system. Russian prices for

energy are still partially state-controlled at below world prices. Further price liberalization for energy will likely result in some additional worsening of livestock producers' terms of trade as energy prices move closer to world levels. Producers' price-cost squeeze eased a bit in 1995 (particularly via lower mixed-feed prices). However, in 1996 input prices again appeared to have risen faster than output prices.

Since reforms began, feed productivity, i.e., *feed conversion rates*—the amount of feed used per kilogram of animal weight gain—have been worsening as increasing amounts of feed are needed to produce a kilogram of meat. Compared with 1991, the amount of feed required to produce an additional kilogram of animal weight gain was estimated to be about 35 percent greater for pork, and 25 percent for cattle.

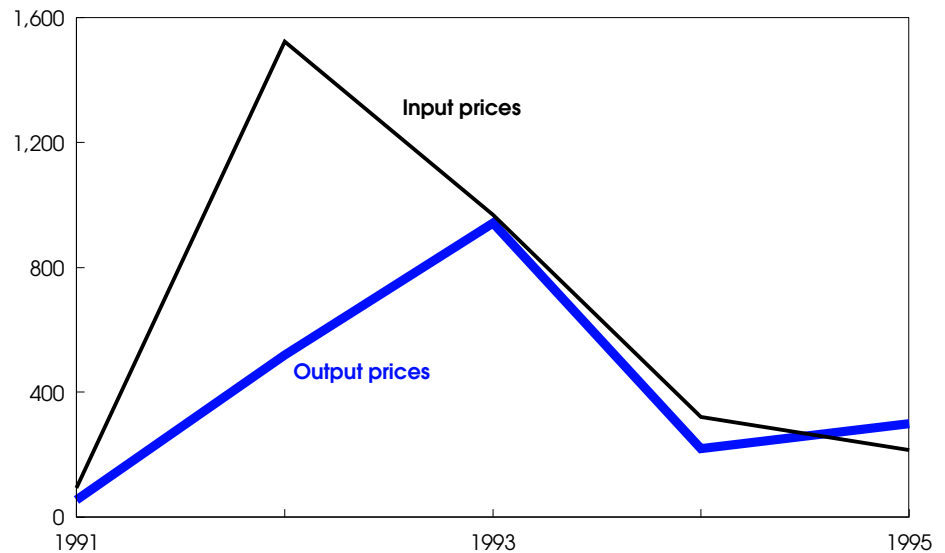
However, the data on feed conversion are aggregate numbers, covering all types of feed. Declining feed conversion rates are due in part to shifts to cheaper, less nutritious feeds by Russian livestock producers. For hogs, the switch has been from high-energy grains to other less costly feed, and for cattle, from relatively expensive mixed feed to forage crops. Thus, total monetary costs of production from worsening aggregate feed productivity have not risen by as much as the productivity figures alone might at first suggest.

In 1995, for the first time in 5 years, feed conversion rates on former state and collective farms showed some improvement, becoming more efficient for cattle and stabilizing for hogs. Data concerning changes in feed conversion in the private sector are not available. Yet, it is likely that improvement of feed conversion on private holdings was even greater, mainly because the profit motive of these producers is stronger. Since the share of total meat production from private producers has been rising, one can anticipate some continuing improvement in feeding efficiency.

Two other important inputs used in meat production for which productivity has worsened since 1991 are *labor and energy*. As with feed, total use of labor and

Livestock Producers' Price-Cost Squeeze Eases in Russia

Percent change



Economic Research Service, USDA

energy in livestock production has been declining, while labor and energy used per unit of output has been growing.

Labor costs present a daunting hurdle. Although livestock inventories and production have been declining, the *large former state and collective farms*, where the drop has been greatest, have not been able to shed labor by an equally large magnitude. Besides employing their workers, these farms provide for all social welfare functions, such as health, education, and support for the retired. These welfare obligations not only add to production costs, but also severely reduce flexibility in changing the size and nature of the work force.

A similar development concerns energy use. The large livestock complexes continue to use much of their energy inefficiently. While energy use is falling, it is not dropping as rapidly as output, resulting in worsening productivity and higher unit costs of production.

The *inherited system of livestock production* has also played a significant role in the downsizing of the livestock sector. The big specialized farms held the bulk of

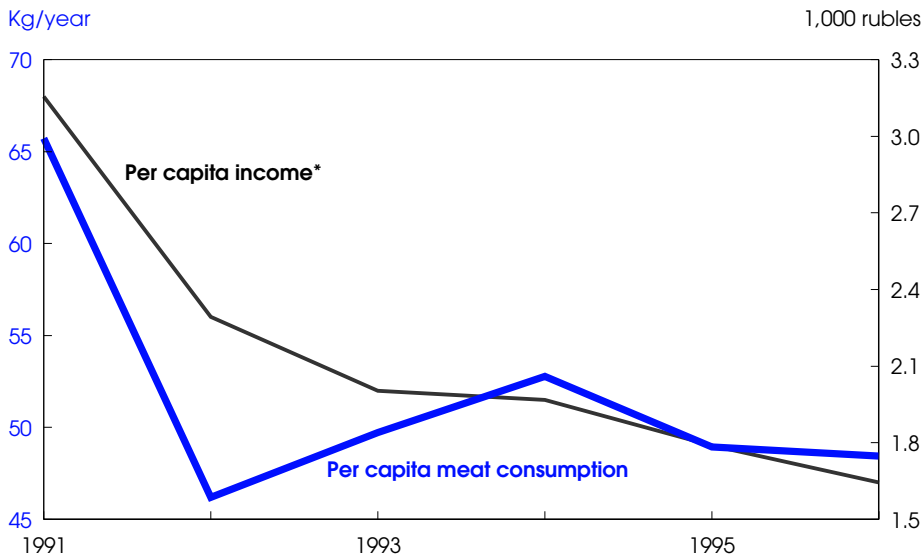
hog and poultry inventories, and were dependent on the state for delivery of subsidized feed (much of it coming from imports), and for providing energy and fuel at low cost. Price liberalization as well as reduction in state subsidies have hurt these complexes severely.

Unlike cattle producers, who could switch to forage crops and pasture grazing, poultry and hog producers in the large complexes had much less opportunity to change their feed mix. This has led to the slaughter of animals on the state complexes, and a partial shift of hog inventories to the private sector.

The bulk of livestock production continues to come from the former state and collective farms, which hold 70 percent of cattle inventories, 65 percent of hogs, and 60 percent of poultry. About 70 percent of these farms are currently reported as unprofitable. Until recently, large state subsidies allowed these farms to cover the gap between production costs and sales revenue. In 1992, for example, per-unit state subsidies (both direct and indirect) equaled about two-thirds of the farmgate price that beef and poultry producers received, and one-third of the price

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Russians Are Consuming Less Meat As Incomes Decline



1996 forecast.

* Adjusted for inflation.

Economic Research Service, USDA

obtained by pork producers. However, by 1994, per-unit state subsidies represented about one-third of producer prices for beef and poultry, and about 10 percent for pork.

In 1995, 20 percent of production costs for beef and 4 percent for pork were not covered by revenue (either from sales or subsidies) on the former state and collective farms. If farms are technically bankrupt but keep producing, it is largely because state creditors are granting de facto loans by not calling in their debts. Since most of the former state and collective farms that produce livestock products are technically bankrupt, a significant number are likely to undergo downsizing and restructuring, further slowing the sector's return to growth.

Falling *animal productivity*—i.e., annual average weight gain per animal—due in part to the shift to lower quality feed rations, has also contributed to declining output in the livestock sector. From 1990 to 1994, annual weight gain per animal has dropped by almost 30 percent for cattle and 20 percent for hogs. However, in 1995 animal productivity of cattle and hogs increased by about 5 percent.

The period of extreme increases in input costs for producers is likely ending. And recent modest improvements in both animal and feed productivity suggest that the contraction of the livestock sector may bottom out in another 2-3 years. But when growth in output does begin, it is not expected to be rapid.

A primary way in which meat production could rise is via increases in input productivity. However, strong productivity growth will probably require major institutional reform within the agricultural and food economy to strengthen incentives for farms (especially the state-supported ones) to use inputs more efficiently. Given the strong conservatism of the Russian agricultural establishment, such reform is unlikely in the near to medium term.

Foreign investment should stimulate some productivity growth, through technology transfer and also by improving management practices. The poultry sector may be the first to attract foreign investment, given its strong sales growth and its relatively short production cycle. However, in light of the serious uncertainties of doing business in Russia, large-scale investment seems unlikely in the near term.

After Steep Fall, Meat Consumption Flattens

During the Soviet era, per capita meat consumption was significantly higher in Russia than in other countries with similar per capita incomes, and was near to that of countries with much higher per capita incomes (e.g., Great Britain and Finland). Since 1991, meat consumption in Russia has fallen significantly. The drop in poultry consumption has been much less than for beef and pork. Per capita consumption of beef in 1996 is estimated to be 36 percent lower than in 1991, and for pork 33 percent, while for poultry the corresponding decline is 8 percent. Actually, poultry consumption has grown since 1994, whereas consumption of beef and pork have declined continuously since reform began.

The principal reason for the drop in meat consumption has been the decline in consumers' inflation-adjusted income—their purchasing power—following reforms. Since 1991, real per capita income in Russia has decreased by about 40 percent.

Demand for meat products is fairly sensitive to changes in income, whereas demand for staple products—e.g., bread and potatoes—is not. Since 1991, per capita consumption of staples has in fact increased, as consumers have switched to these products and away from relatively expensive meats. Another factor behind the decline in meat consumption is the broader post-reform selection of nonfood, consumer goods and services that have gained a larger share of consumer incomes.

The change in relative prices of the three meats—beef, pork, and poultry—following price liberalization has also influenced consumption behavior. Prices for beef and pork have risen by a greater degree than for poultry. Before the breakup of the USSR, the consumer price of a kilogram of poultry was 40 percent higher than for beef and pork. By 1995, a kilogram of poultry cost consumers 23 percent less than a kilogram of pork, and 8 percent less than a kilogram of beef.

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Russian consumer demand for poultry and other meats (domestically produced or imported) is expected to stabilize during the next 2 years, and then steadily grow over time in step with expected growth in real—i.e., inflation-adjusted—gross domestic product (GDP). Growth of consumer income and purchasing power are positively related to growth in GDP. Since demand for meat is relatively responsive to changes in income, the growth in consumer purchasing power from rising real GDP should steadily boost consumer demand for meat.

After years of sharp decline, Russia's real GDP fell only an estimated 4-5 percent in 1996, and may stop falling in the next 1-2 years. It appears that the market reform policies of the Russian government will continue, albeit slowly, into the indefinite future, so that by 2000 the economy could be growing in real terms at 3-4 percent a year.

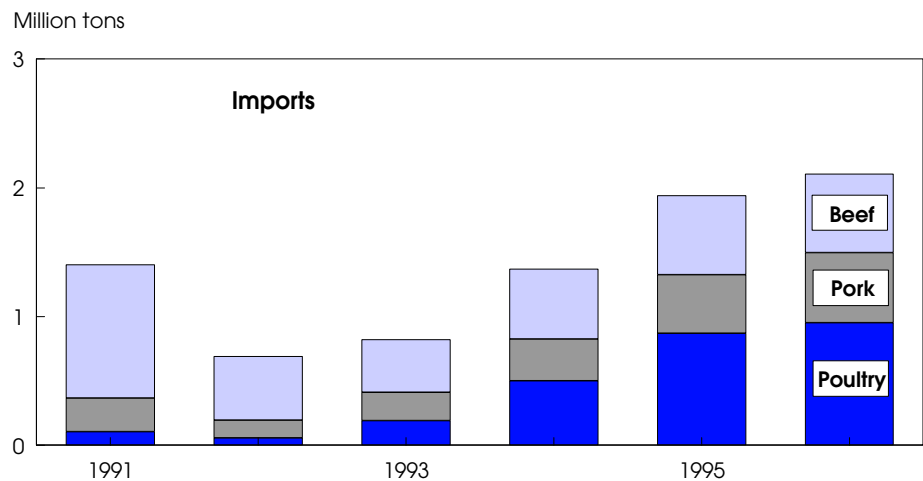
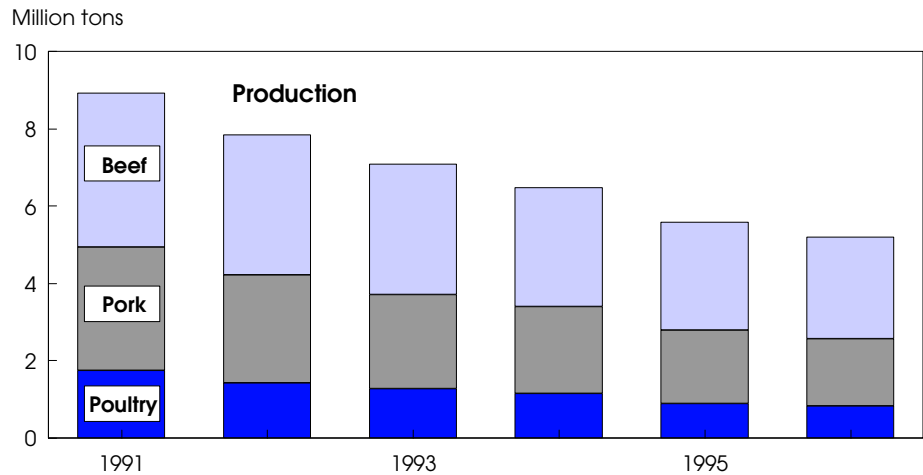
Russia Switches from Bulk Grain To Grain "On-the-Hoof"

U.S. agricultural exports to Russia changed dramatically as the country's economy began the transition from centrally planned to market-driven. During the Soviet era, Russia regularly imported over 20 million tons of grain annually (valued at roughly \$2.5-\$3 billion) in order to supply an inefficient, vastly subsidized and overly expanded livestock sector. Feed conversion ratios in Russia for beef and pork are currently estimated to be about a third as efficient as in the U.S.

With the introduction of market reforms, Russia's livestock sector was one of the first and hardest hit. Given the livestock industry's extremely inefficient conversion of feed grain to meat, the effect on trade was the shift from importing feed grain to directly importing meat, particularly poultry meat and pork.

Russia's total 1996 meat imports are estimated at about \$2 billion, with U.S. poultry, pork, beef, and other meat sales equaling nearly \$1 billion. This \$1 billion of U.S. meat exports to Russia

Russian Meat Production Down, Imports Record High in '90's



1996 forecast.
Economic Research Service, USDA

equates to roughly \$350-\$400 million (f.o.b.) in grain and soymeal, as American farmers and traders capture the value added. Meat is estimated to account for over 75 percent of the total value of U.S. agricultural exports to Russia in 1996, compared with under 5 percent in 1991.

Since trade and price liberalization were introduced, the higher relative cost of producing meat in Russia has increased the competitiveness of imported meat. In addition, very high domestic processing

and marketing costs due to poor or nonexistent market infrastructure, further weaken the competitiveness of Russian output. The higher quality and variety of imported meats, including meats that are better packaged and easier to prepare, have also contributed to consumer preference for them. Changes in real incomes and significant income inequality in Russia partially account for increased demand for certain types and cuts of imported meat.

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The strong real appreciation of the ruble vis-a-vis the dollar also has favored imports. For example, while the nominal ruble exchange rate in 1993 depreciated by about 200 percent from a year earlier, the inflation-adjusted exchange rate actually rose over 125 percent. This trend continued through 1996, making many imports less expensive in relative terms than domestic products. A mid-1996 Russian government survey among food retailers specified four primary reasons imported products are preferred over domestic ones: more favorable terms of payment; faster turnover of food items; longer shelf life of products; and better packaging and appearance.

Russia Is Top Importer Of U.S. Poultry Meat . . .

Russia is the world's largest importer of poultry meat, and poultry is by far Russia's leading meat import, making up about 45 percent of its meat imports in 1996 by volume. Of all Russian meat imports, poultry meat has risen the most since 1992, up by over 20 times that year's volume. Poultry meat is estimated to account for over 80 percent of the total value of U.S. meat exports to Russia in 1996.

The primary reason for the dramatic surge in Russian poultry imports has been the sharp price difference between domestic and imported poultry meat. In 1994, the price of domestically produced meat, despite quality shortcomings, began to exceed import prices. In 1995, domestically produced poultry prices exceeded imported meat prices by 20-40 percent in some cases. Another major factor in rising imports has been the reform-induced fall in real incomes, which created a vast low-income population seeking the least expensive form of meat protein, i.e., poultry.

The U.S. has been in a particularly favorable position to meet this demand, as it can not only provide large quantities of poultry meat in a short period, but can also supply just those parts of the bird with the lowest relative price—the dark-meat leg quarters. On the other hand, European poultry producers, except for Holland, have been primarily geared to selling more expensive whole birds, and have been generally unable to compete with U.S. exporters. In 1996, the U.S. accounted for an estimated 80 percent of Russia's total poultry imports.

. . . & the World's Third-Largest Importer of Red Meat

Russia's *pork imports* have quadrupled since 1992, making it the world's second-largest importer in 1996 after Japan, and the likely number-three market for U.S. pork exports. Russia's *beef imports* have increased by nearly 25 percent since 1992, placing Russia third in 1996 global imports, but only around the number-ten market for U.S. beef exports. The stronger growth in pork imports reflects lower prices relative to beef on the world market, as well as its higher domestic cost of production compared with beef.

Russia's beef and pork imports are driven by quite different forces from those of poultry meat. First, the price gap between domestic and imported red meat has been significantly less than a similar gap for poultry. Second, unlike poultry meat, only a small share of beef and pork imports are sold directly at the retail level. Imported red meats that are sold directly to the consumer are generally the more expensive, finer quality cuts affordable only to upper income consumers, representing the smallest segment of the population. This small but wealthier class also accounts for much of the red meat imports that come in the form of processed meats.

The majority of red meat imports, and a burgeoning trade in variety meats and offal, are lower quality and purchased for further processing by sausage and processed-meat plants. For these large-scale, urban processing operations, the demand for imports is generated primarily by processors' preference for the superior transaction terms of foreign suppliers. This includes such factors as more favorable credit terms; greater contract reliability, particularly concerning quality, grading, and delivery times; greater access to insurance; and the ability to make large-scale consignments from single suppliers.

While about 95 percent of Russia's *pork and processed pork imports* come from countries outside the former Soviet Union (FSU), about half of its beef imports come from extra-FSU sources. Of Russia's extra-FSU pork imports, the U.S. share is about 10-15 percent, with the European Union (EU) and neighboring China each providing nearly a third of the total.

Russia's extra-FSU beef imports come primarily from the EU, principally because of geographic proximity and price, with the U.S. accounting for less than 3 percent of the total.

Russian Protectionism Is Growing

The combined effect of surging Russian meat imports and plummeting meat production has generated increasing demands for stronger protection of the domestic livestock industry. Proponents of increased tariffs and quotas cite both the contraction of animal husbandry in Russia, and the increase in imports as a share of total consumption. For 1996, imports as a share of consumption are estimated at about 20-25 percent for beef and pork, and around 50 percent for poultry meat. The bulk of these imports, however, are going mainly to Russia's top urban markets, Moscow and St. Petersburg, and represent higher shares in these cities.

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Russia currently levies import duties of 15 percent on red meats and products, and 30 percent on poultry meat. It also levies a minimum per-unit tariff on certain meat imports. Imports of beef are banned from the U.K., Northern Ireland, Switzerland, and parts of France and Ireland, reportedly due to the presence of mad cow disease in these countries. Since the settlement of the Russian ban on U.S. poultry imports earlier this year, poultry imports do not officially face non-tariff barriers.

Given the rising tide of protectionist sentiment in Russia, the threat of further trade-limiting measures cannot be ruled out. The strongest argument within Russia against increased protectionism is that consumers in Russia's largest cities would bear the brunt of reduced meat imports. This in turn could have significant political implications. To a lesser degree, Russia's concern over complicating its WTO accession process likely causes some reluctance to raising trade barriers.

The introduction of increased tariffs or other trade barriers by Russia would have sharply differing effects on meat exporters. For the U.S., where total poultry

exports now account for nearly 20 percent of domestic production, and with shipments to Russia making up about a third of total U.S. exports, a decline in exports would likely have significant repercussions for the poultry industry. For example, in early 1996, when Russia temporarily imposed its ban on imports of U.S. poultry meat, U.S. leg prices fell by about 25 percent within a month.

At the same time, a hike in poultry tariffs could benefit beef and pork exporters. The EU, with its substantial buildup of beef stocks, might find a means to dispose of its surplus. On the other hand, a further clampdown by Russia on beef imports from countries with recent cases of mad cow disease could open opportunities for U.S. red meat exporters.

In the end, an increase in Russian import tariffs is only as effective as officials' willingness or ability to enforce them. Based on past performance, tariffs have often been established to allay producer concerns, but not always enforced.

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January Releases—USDA's Agricultural Statistics Board

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.

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- 3 *Dairy Products*
- 6 *Poultry Slaughter*
- 8 *Broiler Hatchery*
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Crop Production (8:30 am)
Egg Products
- 10 *Crop Production, Annual (8:30 am)*
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