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# Livestock, Dairy, and Poultry Outlook

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## Pork and Poultry Production Forecast Higher in 2014, Beef Lower

**Note:** Starting in May, this report contains [no data updates or analysis](#) on milk cows or milk output per cow.

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Approved by the World Agricultural Outlook Board.

**Beef/Cattle:** -Volatility characterizes recent price movements as drought continues in the Southwestern United States and cool weather dampens enthusiasm for outdoor grilling. As a result of the drought, cow slaughter is above year-earlier levels, and slaughter cow prices have declined as pastures deteriorate and hay and feed prices increase. Stronger wholesale cutout values and fed cattle prices are encouraging.

**Beef/Cattle Trade:** U.S. beef imports for the first quarter of 2013 were 1.4 percent higher than a year ago, at 590 million pounds. Beef exports for the first quarter of 2013 totaled 557 million pounds, just fractionally below the year-earlier first-quarter level. U.S. beef imports are expected to expand in 2014, while exports should tighten. U.S. cattle imports are expected to trend lower through 2014.

**Pork/Hogs:** USDA forecasts a 2.3-percent increase in 2014 pork production, driven primarily by expectations of lower feed costs. Pork exports are expected to recover in 2014, increasing almost 5 percent compared with 2013. First-quarter 2013 exports were sharply lower—15.6 percent—on reduced shipments to Asia, Mexico, and Russia. For 2013, U.S. pork exports will likely fall almost 7 percent below 2012 volumes.

**Special Article, “Determinants of Japanese Demand for U.S. Pork Products in 2012”:** This article identifies a depreciating yen-U.S. dollar exchange rate and increased Japanese pork production as variables likely contributing to lower Japanese imports of U.S. pork products in 2012.

**Poultry:** Broiler meat production is forecast at 38.9 billion pounds in 2014, 2.9 percent higher than in 2013. The expansion in production is expected due to lower feed costs and continued gains in domestic economic conditions. Lower beef production and higher prices will also help provide broiler integrators with an incentive to expand production. Turkey production in 2014 is expected to increase by 3.6 percent to 6.2 billion pounds after declining in 2013. Total egg production, is expected to reach 8 billion dozen in 2014, with table egg production and hatching egg production higher.

**Poultry Trade:** Broiler and egg and egg product shipments in March 2013 increased from a year ago, while turkey shipments decreased over the same period. Broiler exports totaled 651 million pounds in March 2013, a 9-percent increase from a year earlier. Egg and egg product exports totaled 26.1 million dozen in March 2013, an increase of 15 percent from last March. Turkey shipments dropped 5.3 percent from a year ago, totaling 60.8 million pounds. Poultry exports in the first-quarter of 2013 were up from a year ago for broilers and egg and egg products but down for turkey. .

**Dairy:** Milk production is expected to increase in 2014 compared with this year. Lower feed prices will improve the profit outlook for producers next year. Continued strong demand, both foreign and domestic, will maintain 2014 prices near 2013 levels.

### *Drought Continues To Drive Cattle Movements and Prices*

Despite improvements in soil moisture and pasture conditions in many areas of the Central and Northern United States, continuation of the drought in the Southwestern and Southern Plains States generated some fiscal pain for cow-calf producers as feeder cattle and calf prices began to deteriorate over the last weeks in April. Feeder cattle prices began to drop as a result of declining summer pasture prospects and increasing hay and other feed prices. Feeder cattle sales (*AMS National Feeder & Stock Cattle Summary*, SJ\_LS850) have been averaging almost 5 percent above year-earlier sales since the first week in March. Many of these cattle have weighed over 600 lbs. As became evident with March's net placements of feeder cattle in feedlots of 1,000 head or more—up by almost 6 percent over March 2012 placements (*Cattle on Feed*)—many of these heavier cattle were headed to feedlots, a move that could also appear as relatively heavy placements in April-May as cattle are removed from graze-out wheat.

Another result of the drought in Southern areas is continued high levels of cow slaughter relative to January 1 cow inventories comparable with—though slightly lower than—the high rates of slaughter of 2011 and 2012, which have led cow prices to slip. For most of March and April, federally inspected (FI) weekly beef cow slaughter has averaged about 9 percent higher year-over-year than in 2012. Weekly total FI cow slaughter has averaged almost 7 percent higher year-over-year as a result of a 5-percent increase in dairy cow slaughter during the same weeks.

After moving erratically for several weeks, fed cattle prices increased over the last 3 weeks as a result of year-over-year declines in inventories of cattle on feed in feedlots of 1,000 head or more. Contributing to the earlier lack of demand for cattle was the effect of the continued cold weather on consumer purchases of meats as the summer grilling season begins at the end of this month. With cattle feeding costs moving into the \$127-\$128 per cwt range (High Plains Cattle Feeding Simulator) and feeder cattle prices slipping, cattle feeders are beginning to see some potential for positive returns toward the end of 2013 and beyond.

Wholesale beef cutout values also increased sharply over the last 3 weeks, breaking through the \$200/cwt level. Some market analysts have attributed the price increases to meat packers having purchased too few cattle to keep lines moving in the short run. This has resulted in increased bids for fed cattle and dressed beef at the wholesale level. Meanwhile, monthly Retail Choice, at \$5.30/lb in March, and All-Fresh beef prices, at \$4.92/lb, continued their sequential record-setting trends, despite the availability of relatively lower pork and poultry prices and the damper of continued cold weather on outdoor grilling.

### ***U.S. Cattle Imports from Mexico Decline as Imports Increase from Canada***

U.S. cattle imports for 2013 are forecast at 2.125 million head, or 5 percent below year-earlier levels. Imports from Mexico are largely expected to tighten this year, while increased cattle numbers may come from Canada due to Canada's gradual herd-size recovery. According to AMS weekly reports, cattle imports from Mexico through May 4 were 37 percent below year-earlier levels. This dip in Mexican cattle import numbers finally comes as a reflection of inventory numbers in Mexico that have been down over the last few years. According to AMS reports, through April 27, increases in imports of Canadian feeders and slaughter cows have been substantial. Imports of feeder cattle are nearly double those of a year ago, and slaughter cattle imports are more than double a year ago. The trend of higher imports from Canada and lower imports from Mexico is expected to continue in play into next year, perhaps throughout the year. The U.S. cattle import forecast for 2014 is expected to trend lower overall through 2014, at 2 million head or 7 percent lower, year-over-year.

### ***U.S. Beef Imports Set To Expand into 2014***

U.S. beef imports for the first quarter of 2013 totaled 590 million pounds, 1.4 percent higher than a year ago. However, imports were lower, year-over-year, from two of the three historically largest beef exporters to the United States, Australia and Canada, at 6 and 25 percent below first-quarter levels a year earlier.

Imports from New Zealand and Mexico were both 28 percent higher than in the same period a year ago. Despite lower first-quarter imports from Australia, imports from Oceania are expected to strengthen through the remainder of this year and through 2014. Imports of beef from Mexico are also stronger due to the Mexico's initiative to export more beef, which includes adding to Tipo Inspección Federal (TIF) plant numbers (federally inspected slaughter plants in Mexico that meet standards similar to those in the United States). U.S. beef imports for 2013 are expected to total 2.5 billion pounds, marking a 15-percent yearly increase. Beef imports for 2014 are expected to strengthen from most major trading partners as herd inventories expand further, increasing nearly 10 percent to 2.8 billion pounds.

### ***U.S. Beef Exports Tighten into 2014***

U.S. beef exports for the first quarter of 2013 totaled 557 million pounds, just fractionally below the first-quarter export level of 2012. U.S. beef exports to Japan and Canada were 26 and 30 percent higher than the first quarter last year. Exports to Mexico and South Korea, however, were 32 and 6 percent lower than a year earlier. U.S. exports to Taiwan, Hong Kong, and Egypt were also 58, 83, and 11 percent higher, respectively, while exports to Vietnam remained at only a fraction of what they were a year ago. Beef exports to Russia have also rapidly declined this year. Even so, while U.S. beef supplies tighten, exports are again finding those historically large export destinations and keeping pace with year-earlier flows, meeting expectations for the first half of this year. Beef exports are expected to tighten, however, in the second half of the year, based on the tighter domestic supply. Third- and fourth- quarter exports are expected to be about 3 and 7 percent

below year-earlier levels. Total beef exports for 2013 are forecast at 2.4 billion pounds, or 2 percent lower overall for the year. U.S. beef exports in 2014 are expected to total 2.3 billion pounds, a 5-percent yearly decline.

### ***Lower Feed Costs Expected To Drive Pork Production Higher in 2014***

The significant reductions in corn and soybean meal prices that USDA expects from larger 2013-2014 crops, should translate into welcome reductions in pork production costs in 2014. Pork producers are expected to take advantage of lower feed costs to modestly increase pork production next year. Commercial pork production in 2014 is expected to increase 2.3 percent to 24 billion pounds. As in previous years, production increases will likely derive from a series of modest increases along the production sequence, with farrowings expected to be up modestly (almost 1 percent, year-over-year, compared with 2013), continued moderate increases in litter rates (about 1 percent above 2013), and higher average dressed weights (about 1 percent higher than 2013), which together are expected to set another pork production record in 2014.

Exports are expected to recover moderately in 2014 after a year of tough adjustments to lower levels of demand from Asia and Russia in 2013. Exports next year are forecast at 5.3 billion pounds, an increase of almost 5 percent compared with 2013. Attractive U.S. pork prices and strengthening global demand are expected to be the primary drivers of foreign demand in 2014. U.S. pork imports next year are expected to be about the same as in 2013: about 800 million pounds.

In 2014, projected production increases, together with higher net exports and moderately higher stocks levels, leave the quantity of pork available for domestic disappearance about 1 percent higher than that expected in 2013. USDA forecasts for 2014 imply a per capita retail weight disappearance of 47.6 pounds per person, up almost 1 percent from 2013.

Increased production, together with higher stocks and higher levels of pork available for disappearance, should hold 2014 average prices of 51-52 percent lean live equivalent hogs to \$56-60 per cwt, 1 percent lower than the average hog price forecast for 2013. Retail prices next year are expected to average in the mid-to-high \$3.20's per pound, more than 3 percent below retail prices forecast for 2013.

### ***Pork Exports Sharply Lower in March and First Quarter***

U.S. exporters shipped 397 million pounds of pork to foreign destinations in March, more than 18 percent less than a year ago. With each month thus far in 2013 year-over-year lower, the first-quarter pork export figure came in almost 16 percent below the same period last year. While this presents a somber tableau overall, there were some bright spots; among them were year-over-year higher first-quarter shipments to Canada (+6.2 percent); to Central and South America (+14.6 percent) (especially to Costa Rica, Panama, and Columbia); the Philippines (+31.3 percent); and Ukraine, which imported almost six times more U.S. pork in the first quarter than a year ago because of recent restrictions imposed on imports of Brazilian pork products.

In the first quarter, slower shipments to Asia and to Mexico pushed U.S. exports below the same period last year. In Asia, U.S. pork faced strong headwinds in Japan (exports down almost 9 percent). Slower Japanese demand likely derives largely from the 16.4-percent average first-quarter depreciation of the yen, along with

slightly higher domestic pork production. In China, year-over-year lower domestic hog prices likely account for lower import demand. In South Korea pork production has rebounded strongly after foot and mouth disease reduced the national herd in late 2010-early 2011.

In Mexico, while the peso has appreciated almost 3 percent against the U.S. dollar and the Mexican economy continues to expand at rates approaching 4 percent per year, first-quarter shipments of both U.S. pork and beef to Mexico were below a year earlier. Pork exports to Mexico were almost 14 percent lower than in first quarter a year ago, and U.S. beef exports were off by more than 32 percent. Part of the reason for Mexico's lower red meat imports could perhaps be explained by its higher first-quarter imports of U.S. chicken products. U.S. exports of broiler products increased by more than 13 percent, and other U.S. chicken exports to Mexico more than doubled. On the other hand, first-quarter U.S. turkey exports to Mexico were 13 percent lower than a year ago.

For 2013, total U.S. pork exports are expected to be 5.03 billion pounds, almost 7 percent below volumes exported in 2012.

The following table provides a summary of first-quarter U.S. pork exports:

**First quarter 2013: U.S. pork exports, volumes and trade shares of 10 largest foreign destinations**

	Country	2013	2012	Percent	2013	2012
		Jan.-Mar.	Jan.-Mar.	change	Share of	Share of
		Million lbs.	Million lbs.	(2013/2012)	total exports	total exports
				%	%	%
	World	1,218	1,444	-15.6		
1	Japan	343	376	-8.8	28.1	26.0
2	Mexico	266	309	-13.9	21.9	21.4
3	Canada	144	136	6.2	11.8	9.4
4	China/Hong Kong	140	241	-41.9	11.5	16.7
5	S. Korea	100	147	-32.5	8.2	10.2
6	Australia	53	58	-9.5	4.3	4.0
7	Philippines	26	20	31.3	2.1	1.4
8	Russia	17	45	-61.9	1.4	3.1
9	Honduras	15	14	5.3	1.3	1.0
10	Colombia	15	9	63.3	1.2	0.6

Source: USDA/ERS. <http://www.ers.usda.gov/data-products/livestock-meat-international-trade-data.aspx>

## Lower First-Quarter Live Swine Imports

First-quarter U.S. imports of live swine from Canada, at 1.3 million head, were almost 8 percent lower than in the same period last year. Lower imports are consistent with the lower January 1, 2013, Canadian swine inventories— reported in *United States and Canadian Hogs*, last published by USDA\NASS on March 6, 2013

(<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1624>)—and negative U.S. producer returns from finishing animals so far in 2013, reported by Iowa State University (<http://www.econ.iastate.edu/estimated-returns/>). USDA lowered its 2013 forecast for live imported swine based on expectations of continued reductions in Canadian swine inventories. The United States is expected to import 5.4 million head in 2013—down 4 percent from 2012. U.S. imports of live swine are expected to be about the same magnitude in 2014.



### *Broiler Production Higher in 2014*

U.S. broiler meat production is forecast to total 38.9 billion pounds in 2014, up 2.9 percent from 2013. The growth is expected to be spread throughout the year as processors expand production in response to lower feed costs and generally better economic conditions. The increase is expected to come from both a higher number of birds slaughtered and increases in average bird weights. The incentive for broiler integrators to expand production in 2014 is expected to result mainly from two factors. The first is an expected decline in feed costs from 2012/13, about 30 percent for corn to between \$4.30 - \$5.10 per bushel in 2013/14 and about 30 percent for soybean meal prices to an average of \$280 - \$320 per ton. The second is expected gains in real per capita disposable income and a gradual lowering of the unemployment rate.

Broiler meat production in first-quarter 2013 totaled 9.14 billion pounds, a small increase (up 0.6 percent) from the same period in 2012. The number of broilers slaughtered in the first quarter fell by 0.8 percent to 2.06 billion birds. However, this decline in birds slaughtered was offset by an increase in average live weights per bird at slaughter to 5.9 pounds, up 1.3 percent from a year earlier. The gain in average live weights is a long-term trend, with year-over-year average weights increasing consecutively from 1975 through 2012. One factor contributing to a small increase in broiler meat production in first-quarter 2013 production was 1 less processing day than in the same period in 2012.

The broiler meat production forecast for second-quarter 2013 is 9.5 billion pounds, up 1.3 percent from a year earlier. Broiler production on a year-over-year basis is expected to expand faster in the third and fourth quarters of 2013 as feed costs begin to decline.

Over the last 5 weeks (April 6 through May 4), the number of chicks being placed for growout has averaged slightly lower (under 1 percent) than in the same period the previous year. The number of eggs placed in incubators has been about even with the same period in 2012. These estimates point toward little or no gains in the number of broilers available for slaughter in the near future and the likelihood that any gains in broiler meat production will come from increases in average bird weights.

Broiler cold storage stocks totaled 597 million pounds at the end of first-quarter 2013, 9 percent higher than at the end of first-quarter 2012. Increase in broiler cold storage holdings was concentrated in a few categories, with most categories having year-over-year declines. The increases were isolated in three categories, drumsticks, leg quarters, and wings. Cold storage holdings of drumsticks totaled 15.8 million pounds (up 17 percent from the previous year), leg quarter stocks totaled 99.6 million pounds (up 38 percent), and wing stocks rose 126 percent from the previous year to 75 million pounds. While leg quarter prices have been gradually increasing, the higher stock levels have kept some downward pressure on prices in the face of almost no gain in broiler meat production and continued gains in broiler meat exports. The export market is especially important to leg quarter prices, with over 4 billion pounds of leg quarters exported in 2012, 56 percent of all broiler meat exports. The buildup in wing stocks has been reflected in wholesale

wing prices which continue to fall after peaking at over \$2.00 per pound in January. All the other categories of broiler cold storage holdings were lower at the end of March compared with the previous year. Stocks of whole birds, whose wholesale prices have been rising, were down by 11 percent, and stocks of legs, thighs, and thigh meat were all down over 16 percent. With only a small year-over-year increase forecast for broiler meat production in second-quarter 2013, prices for these broiler products will experience some upward pressure. The national wholesale price for whole broilers is expected to average 88 - 96 cents per pound in 2014, down almost 3 percent from the previous year as higher production due to reduced feed costs places downward pressure on prices.

Broiler parts prices in April tend to reflect the changes described in cold storage holdings. The three categories that had higher cold storage holdings (drumstick, leg quarters, and wings) were those that showed lower prices in April compared with the previous year. The price drop was most pronounced in wings, where the large increase in cold storage holdings placed downward pressure on prices. Wing prices averaged \$1.49 per pound in April, down 17 percent from the previous year and down \$0.56 per pound from their January 2013 price. Lower stock levels were also reflected in higher prices. Lower whole bird stock levels have resulted in rising prices over the last several months. In April, the national whole bird price was \$1.07 per pound, 26 percent higher than in April 2012. The pattern of lower stocks and higher prices holds true for boneless/skinless breast meat, as well. The average April price for boneless/skinless breast meat was \$1.61 per pound, an increase of 18 percent from the previous year.

### ***Turkey***

Turkey meat production is expected to increase by 3.6 percent from the previous year in 2014 to 6.2 billion pounds. The cause of the production increase is expected to be a combination of both an increase in the number of birds slaughtered and slightly higher average live weights at slaughter. With lower feed costs projected for 2014, turkey producers should have an incentive to increase production in 2014, especially as general economic indicators for the domestic economy are also expected to remain positive.

In first-quarter 2013, turkey meat production was 1.46 billion pounds, up 0.9 percent from first-quarter 2012. With that small increase, turkey meat production has increased on a year-over-year basis for the last five consecutive quarters. The increase in turkey meat production was the result of an increase in average turkey weights at slaughter to 31.3 pounds, 1.6 percent higher than during the same period in 2012. This average live weight increase more than offset a decline (down 1.1 percent) in the number of birds slaughtered to 58.3 million. As with broilers, the average live weight for turkeys at slaughter has been increasing for a long time, rising in all but 3 years between 1981 and 2012.

With recent declines in poult placements, the forecast for turkey meat production in second-quarter 2013 was lowered by 50 million pounds to 1.48 billion pounds, down almost 3 percent from the previous year. While some gain in average live weights is anticipated, it is likely to be offset by a lower number of birds available for slaughter. The forecast for the second half of 2013 is for a production of 3.03

billion pounds, fractionally higher than during the same period in 2012, with production starting to expand in fourth-quarter 2013.

### ***Turkey Stocks Higher***

With year-over-year gains in production over the last five quarters, turkey cold storage holdings have also expanded. At the end of first-quarter 2013, turkey stocks were 402 million pounds, 7 percent higher than in first-quarter 2012. The increase was a combination of higher stocks of whole birds, up 20 percent, and increases in stocks of turkey breast meat, 8 percent higher. Stocks of whole birds totaled 190 million pounds, and there was a wide difference between stocks of whole toms (up 36 percent) and whole hens (up 7 percent). The higher stock levels for whole birds have had a depressing effect on wholesale prices. In April, prices for frozen whole hens averaged \$0.97 per pound, down 9 percent from the previous year. Prices for frozen whole toms also declined significantly (10 percent). Prices for breast meat averaged \$1.23 per pound in March (the latest figure available), down 5 percent from the previous year and in line with a 8-percent gain in cold storage holdings. The other categories of turkey cold storage holdings (legs, Mechanically Deboned Meat (MDM), other, and unclassified) were all lower than the previous year. Even with this lower level of cold storage holdings, prices for most wholesale turkey products in March were below the previous year.

Wholesale prices for frozen whole hen turkeys are expected to average \$0.99 - \$1.03 per pound in 2013, down about 4 percent from a year earlier. Higher stocks at the beginning of the year are expected to be offset by only a small gain in production and by the end of the year are expected to be modestly higher than in 2012.

### ***Egg Production Higher in 2014***

Total egg production is expected to total 8.0 billion dozen in 2014, a gain of 1.9 percent from the previous year. Table egg production is expected to total 6.9 billion dozen, 2 percent higher than in 2013. Production is expected to be boosted by lower feed costs and better general domestic economic conditions. The gain in production is expected to be steady throughout the year. This would be the sixth year in a row that shell egg production has expanded. Egg producers are expected to have had the consistently higher prices they need as an incentive to expand production. The increase in production in 2014 is expected to come primarily from an increase in the size of the table egg flock.

Hatching egg production is expected to total almost 1.1 billion dozen in 2014, 1.5 percent higher than the previous year. The expansion is largely based on the forecast for broiler meat production to begin a more rapid increase in the second half of 2013 and into 2014.

### ***Egg Production Higher in First-Quarter 2013***

Total egg production totaled 1.94 billion dozen in first-quarter 2013, up 1.2 percent from first-quarter 2012. The increase was due to greater production of table eggs at 1.6 billion dozen, up 1.3 percent from the previous year and slightly higher (up 0.4 percent) production of hatching eggs, totaling 259 million dozen. Hatching egg

production increased only fractionally in the first quarter, although the size of the broiler breeder flock averaged 1.9 percent higher.

Table egg production for the rest of 2013 is expected to continue about 1 percent higher than the previous year during the remainder of the year. Production of hatching eggs is expected to be somewhat higher in the second half of 2013 as broiler production expansion is expected to be higher in the second half of the year.

### ***Egg Prices Down in 2014***

Better overall economic conditions in 2014 are expected to generate greater demand for shell eggs and egg products, especially from the food service sector. However, higher production is expected to offset the demand and leave overall wholesale egg prices in 2014 at \$1.07 to \$1.16 per dozen, down somewhat from the expected average price in 2013.

Wholesale egg prices in the New York market averaged \$1.27 per dozen for Grade A large eggs during first-quarter 2013, 17 percent higher than in the same period in 2012. Part of the increase in 2013 prices was due to an early Easter holiday. The price increase that normally precedes the holiday occurred totally in the first quarter of this year. Prices reached a high of \$1.48 per dozen shortly before the Easter holiday and declined seasonally to \$0.96 per dozen by late April. Since then, prices have strengthened and by the early part of May had risen to \$1.25 per dozen. Prices for second-quarter 2013 are expected to average \$1.08 to \$1.12 per dozen, up about 10 cents from the previous year.

### ***Broiler Shipments Rose in March***

Broiler shipments rose 9 percent from a year ago, totaling 651 million pounds in March 2013. March 2013 broiler exports had the largest volume recorded since October 2011. The primary reason for the increase in broiler shipments was strong demand from Mexico, Russia, Angola, China, and Iraq compared with a year earlier. Shipments to Mexico increased 15.9 million pounds from March 2012, while shipments to Russia, Angola, China, and Iraq rose by 18.5, 27.9, 17.3, and 14.2 million pounds, respectively.

### ***Broiler Shipments Increased in 2013 First Quarter***

Total volumes recorded during the first quarter of 2013 were up compared with last year's broiler exports. Broiler exports for the first quarter of 2013 totaled 1.759 billion pounds, a 1.3-percent increase from the previous year. Mexico contributed greatly toward this increase, accounting for 18 percent of total U.S. broiler exports.

### ***Turkey Shipments Fell in March***

Turkey exports totaled 60.8 million pounds in March 2013, a 5.3-percent decline from a year earlier. The main reason for the decline was the large reduction in turkey shipments to Mexico. In March 2013, the United States shipped only 26.1 million pounds to Mexico, the smallest amount shipped since July 2010. Reductions in U.S. turkey shipments were also seen in Canada, Hong Kong, and the Philippines. Of these three countries, shipments to Hong Kong experienced the largest reduction, a 79 percent drop from the previous year. A portion of the aggregate decrease was offset by shipments to China, which increased 85 percent from last March.

### ***Turkey Shipments in 2013 First Quarter Were Down***

Low turkey shipments to Mexico and other major markets have had a sizable impact on first-quarter turkey exports in 2013. Turkey shipments in the first quarter of 2013 totaled 178 million pounds, a 2-percent decline from last year's first-quarter totals. During the 2013 first quarter, the United States shipped 10 percent less turkey meat to Mexico than it did a year ago. This decline was partially due to Mexico's substitution of broiler meat for turkey meat.

### ***Egg and Egg Product Shipments Were Up in March***

Egg and egg product shipments in March 2013 increased 15 percent from a year ago. A total of 26.1 million dozen egg and egg products were shipped in March 2013. A strong demand for egg and egg products in markets such as Mexico, Canada, Hong Kong, and United Arab Emirates was the main reason for the increase. Egg and egg product shipments to Canada totaled over 5 million dozen, slightly larger than shipments to Mexico. The two markets accounted for 38 percent of total U.S. egg and egg product shipments. Shipments to Hong Kong were up 39 percent from a year earlier, while total shipments to United Arab Emirates rose 156 percent.

### ***Egg and Egg Product Shipments Increased in First-Quarter 2013***

The total volume of egg and egg products shipped during the 2013 first quarter rose 7 percent from 2012 first-quarter totals. Egg and egg product shipments totaled 67.2 million dozen. This increase was partially driven by the expansion in the Mexican import market due to the Avian Influenza outbreak in several of Mexico's poultry farms that ultimately reduced the country's egg supply.

### ***Lower Feed Costs Will Improve Producer Margins Next Year, Boosting Milk Output; Strong Demand Will Keep Prices Near Current Levels***

Corn prices for 2012/13 are forecast at \$6.70-\$7.10 per bushel—the price range was narrowed, but the mid-point is unchanged from April. Initial forecasts for the 2013/14 year call for corn prices to decline to \$4.30-\$5.10 per bushel. Higher expected yields and higher expected global supplies counter the slow start to this season's planting and underpin the 2013/14 forecast. Current-year soybean price estimates are unchanged from April's forecast; similarly, the soybean meal price forecasts are unchanged from April at \$425 a ton. In 2013/14, soybean meal prices are forecast much lower at \$280-\$320 per ton. Soybean production is forecast up based on higher yields and slightly higher harvested acreage. Meanwhile, the April Milk Production report shows the January-March 2013 U.S. milk production at 50.5 billion pounds, 1.1 percent lower than the corresponding period last year. Some of the decline is due to the absence of a February 29th this year. However, some of the southern and western States are showing larger declines this year than can be accounted for by 2012's leap-day. Meanwhile, many other States are posting year-over-year quarterly increases in milk production.

Beginning with the April Milk Production report, the National Agricultural Statistics Service is no longer reporting cow numbers or output per cow, at least through the end of this fiscal year. Consequently, USDA is not forecasting milk cow inventories or milk per cow. For May, the milk production forecast is unchanged from April. This year's milk production is projected at 201.8 billion pounds. The 2014 milk production forecast is 204.6 billion pounds. Improved producer margins would auger for a sizeable rebound in milk production in 2014.

Current-year fats basis imports are raised to 4 billion pounds this month based on higher than expected imports of butterfat in the first quarter. Imports for the balance of 2013 are lowered slightly. Skims-solids imports were increased for the year to 5.6 billion pounds based on continued demand for casein and milk protein concentrates. For 2014, fats basis imports were lowered to 3.9 billion pounds and skims-solids basis imports were lowered to 5.4 billion pounds, based on higher U.S. milk production in 2014 and lower milk prices.

Exports on both a fats and skims-solids basis were increased in May to 10.0 and 34.7 billion pounds respectively for 2013. Current U.S. and Oceania prices favor U.S. exports. Next year, fats basis exports are forecast to climb to 10.3 billion pounds and skims-solids basis exports are projected at 36.4 billion pounds, an increase from 2013's projected total. Continued strength in international demand and favorable U.S. prices relative to Oceania will likely keep exports firm.

This year's fats basis ending stocks were raised to 12 billion pounds for May and are forecast to decline to 11.8 billion pounds by the end of 2014. Skims-solids ending stocks were raised to 12.1 billion pounds in the May forecast for 2013 and are expected to end at 12.1 billion pounds for 2014. Continued robust international and domestic demand is expected to tighten stocks from their first-quarter levels.

For 2013, prices for cheese, butter, and nonfat dry milk (NDM) were raised based on expected second-quarter strength. Cheese prices are forecast at \$1.745-\$1.795

per pound, butter prices are forecast at \$1.570-\$1.650 per pound, and NDM prices are projected at \$1.590-\$1.630 per pound. In contrast, whey prices are lowered, based on current and expected whey price weakness, to 58.0-61.0 cents per pound. The Class III price is lowered to \$17.80-\$18.30 per cwt as whey price weakness more than offset the higher cheese price. The Class IV price is raised to \$18.20-\$18.80 per cwt as a result of higher NDM and butter prices. The all milk price for 2013 is projected at \$19.50-\$20.00 per cwt.

Next year, increased demand will likely offset greater expected production to some degree, but prices for cheese, butter and whey are forecast lower. Cheese prices are forecast at \$1.675-\$1.75 per pound, butter is forecast at \$1.485-\$1.615 per pound and whey prices are forecast lower at 56.5-59.5 cents per pound. NDM prices are forecast slightly higher at \$1.585-\$1.655 per pound based on continued international demand. The 2014 Class III milk price is forecast at \$17.00-\$18.00 per cwt, and the Class IV milk price is forecast at \$17.80-\$18.90 per cwt. The 2014 all milk price is forecast at \$18.85-\$19.85 per cwt



## Contacts and Links

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Livestock and Meat Trade Data, <http://www.ers.usda.gov/data-products/livestock-meat-domestic-data.aspx>, contains monthly and annual data for the past 1-2 years for imports and exports of live cattle and hogs, beef and veal, lamb and mutton, pork, broiler meat, turkey meat, and shell eggs. The tables report physical quantities, not dollar values or unit prices. Breakdowns by major trading countries are included.

### Related Websites

Livestock, Dairy, and Poultry Outlook, <http://www.ers.usda.gov/publications/ldpm-livestock,-dairy,-and-poultry-outlook.aspx>  
Animal Production and Marketing Issues, <http://www.ers.usda.gov/topics/animal-products/animal-production-marketing-issues.aspx>  
Cattle, <http://www.ers.usda.gov/topics/animal-products/cattle-beef.aspx>  
Dairy, <http://www.ers.usda.gov/topics/animal-products/dairy.aspx>  
Hogs, <http://www.ers.usda.gov/topics/animal-products/hogs-pork.aspx>  
Poultry and Eggs, <http://www.ers.usda.gov/topics/animal-products/poultry-eggs.aspx>  
WASDE, <http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1194>

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**U.S. red meat and poultry forecasts**

	2010					2011					2012					2013					2014	
	I	II	III	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	Annual
<b>Production, million lb</b>																						
Beef	6,248	6,546	6,768	6,741	26,305	6,410	6,559	6,736	6,490	26,195	6,283	6,473	6,586	6,572	25,913	6,172	<b>6,430</b>	<b>6,390</b>	<b>6,115</b>	<b>25,107</b>	<b>5,795</b>	<b>24,105</b>
Pork	5,607	5,302	5,401	6,126	22,437	5,719	5,370	5,484	6,186	22,758	5,858	5,519	5,631	6,244	23,253	5,777	<b>5,575</b>	<b>5,690</b>	<b>6,440</b>	<b>23,482</b>	<b>5,880</b>	<b>24,025</b>
Lamb and mutton	43	40	39	42	164	36	40	36	37	149	39	39	39	39	156	38	<b>37</b>	<b>38</b>	<b>38</b>	<b>151</b>	<b>37</b>	<b>149</b>
Broilers	8,733	9,198	9,496	9,484	36,910	9,290	9,509	9,542	8,860	37,201	9,089	9,381	9,372	9,197	37,039	9,143	<b>9,500</b>	<b>9,600</b>	<b>9,500</b>	<b>37,743</b>	<b>9,450</b>	<b>38,850</b>
Turkeys	1,340	1,383	1,415	1,506	5,644	1,402	1,471	1,423	1,495	5,791	1,446	1,505	1,480	1,537	5,967	1,459	<b>1,475</b>	<b>1,475</b>	<b>1,550</b>	<b>5,959</b>	<b>1,475</b>	<b>6,175</b>
Total red meat & poultry	22,122	22,626	23,291	24,058	92,097	23,011	23,113	23,396	23,225	92,745	22,866	23,085	23,274	23,738	92,962	22,742	<b>23,181</b>	<b>23,357</b>	<b>23,794</b>	<b>93,074</b>	<b>22,790</b>	<b>93,949</b>
Table eggs, mil. doz.	1,610	1,626	1,645	1,666	6,547	1,624	1,634	1,646	1,686	6,590	1,658	1,653	1,677	1,734	6,722	1,680	<b>1,685</b>	<b>1,695</b>	<b>1,745</b>	<b>6,805</b>	<b>1,710</b>	<b>6,940</b>
<b>Per capita disappearance, retail lb 2/</b>																						
Beef	14.6	15.1	15.3	14.6	59.6	14.1	14.6	14.7	14.0	57.3	14.0	14.7	14.5	14.2	57.4	13.7	<b>14.5</b>	<b>14.3</b>	<b>13.7</b>	<b>56.1</b>	<b>13.0</b>	<b>54.3</b>
Pork	11.8	11.4	11.7	12.8	47.8	11.4	11.1	11.0	12.2	45.7	11.1	10.9	11.2	12.7	45.9	11.5	<b>11.3</b>	<b>11.5</b>	<b>12.9</b>	<b>47.2</b>	<b>11.5</b>	<b>47.6</b>
Lamb and mutton	0.2	0.2	0.2	0.2	0.9	0.2	0.2	0.2	0.2	0.8	0.2	0.2	0.2	0.2	0.8	0.2	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.9</b>	<b>0.2</b>	<b>0.8</b>
Broilers	20.1	20.5	21.4	20.4	82.4	21.5	21.5	20.8	19.1	82.9	20.1	20.4	20.3	19.7	80.4	20.1	<b>20.7</b>	<b>20.7</b>	<b>20.4</b>	<b>82.0</b>	<b>20.4</b>	<b>83.5</b>
Turkeys	3.5	3.6	4.1	5.2	16.4	3.5	3.5	4.0	5.0	16.1	3.5	3.6	4.1	4.9	16.0	3.7	<b>3.6</b>	<b>4.1</b>	<b>4.9</b>	<b>16.2</b>	<b>3.6</b>	<b>16.8</b>
Total red meat & poultry	50.7	51.2	53.3	53.7	208.9	51.3	51.3	51.0	51.0	204.6	49.3	50.3	50.6	52.0	202.2	49.5	<b>50.7</b>	<b>51.2</b>	<b>52.5</b>	<b>204.0</b>	<b>49.2</b>	<b>204.6</b>
Eggs, number	61.5	61.4	62.2	62.8	247.9	61.1	61.3	62.2	63.1	247.6	62.3	61.2	62.2	64.0	249.7	62.4	<b>62.5</b>	<b>62.7</b>	<b>64.4</b>	<b>252.0</b>	<b>62.8</b>	<b>254.1</b>
<b>Market prices</b>																						
Choice steers, 5-area Direct, \$/cwt	89.44	96.33	95.47	100.28	95.38	110.07	112.79	114.05	121.99	114.73	125.29	120.91	119.69	125.54	122.86	125.52	<b>125-129</b>	<b>126-134</b>	<b>127-137</b>	<b>126-131</b>	<b>127-137</b>	<b>128-138</b>
Feeder steers, Ok City, \$/cwt	98.73	112.65	112.29	113.55	109.31	127.20	131.09	134.74	141.93	133.74	152.81	150.05	139.31	143.40	146.39	141.36	<b>138-142</b>	<b>146-154</b>	<b>154-164</b>	<b>145-150</b>	<b>155-165</b>	<b>161-171</b>
Cutter Cows, National L.E., \$/cwt	51.79	58.79	58.90	54.93	56.10	68.66	74.88	66.11	63.54	68.30	76.57	83.51	76.94	73.81	77.71	77.87	<b>79-81</b>	<b>79-83</b>	<b>77-81</b>	<b>78-80</b>	<b>78-82</b>	<b>80-84</b>
Choice slaughter lambs, San Angelo, \$/cwt	103.87	106.17	115.57	141.62	116.81	174.66	157.99	161.13	148.61	160.60	145.33	127.08	89.28	89.85	112.89	107.53	<b>89-95</b>	<b>93-101</b>	<b>98-108</b>	<b>97-103</b>	<b>100-106</b>	<b>99-105</b>
Barrows & gilts, N. base, l.e. \$/cwt	50.41	59.60	60.13	50.11	55.06	59.94	68.80	71.06	64.66	66.11	61.68	61.79	61.43	58.63	60.88	59.03	<b>59-61</b>	<b>60-64</b>	<b>52-56</b>	<b>58-60</b>	<b>56-60</b>	<b>56-60</b>
Broilers, 12 City, cents/lb	82.20	85.00	84.50	80.00	82.90	77.90	82.60	78.80	76.80	79.00	87.40	85.1	82	92.1	86.6	103.5	<b>105-109</b>	<b>97-103</b>	<b>93-101</b>	<b>100-104</b>	<b>87-95</b>	<b>88-96</b>
Turkeys, Eastern, cents/lb	75.60	84.40	97.90	103.70	90.40	90.20	99.90	106.40	111.60	102.00	100.70	106.9	108.5	106.1	105.6	96	<b>98-100</b>	<b>100-106</b>	<b>101-109</b>	<b>99-103</b>	<b>90-98</b>	<b>95-102</b>
Eggs, New York, cents/doz.	126.00	82.80	93.10	123.20	106.30	105.80	106.60	117.70	131.20	115.30	108.70	99.7	131.9	129.4	117.4	126.9	<b>108-112</b>	<b>105-111</b>	<b>118-128</b>	<b>114-120</b>	<b>110-120</b>	<b>107-116</b>
<b>U.S. trade, million lb</b>																						
Beef & veal exports	478	585	590	646	2,299	633	702	766	683	2,785	558	625	651	621	2,455	557	<b>650</b>	<b>630</b>	<b>575</b>	<b>2,412</b>	<b>525</b>	<b>2,300</b>
Beef & veal imports	573	690	598	436	2,297	461	593	548	454	2,057	582	669	516	452	2,219	590	<b>695</b>	<b>665</b>	<b>605</b>	<b>2,555</b>	<b>700</b>	<b>755</b>
Lamb and mutton imports	47	46	31	42	166	49	48	31	34	162	37	38	38	40	153	49	<b>38</b>	<b>35</b>	<b>40</b>	<b>162</b>	<b>37</b>	<b>151</b>
Pork exports	1,046	1,081	951	1,146	4,224	1,248	1,200	1,261	1,481	5,189	1,444	1,302	1,252	1,386	5,384	1,218	<b>1,230</b>	<b>1,190</b>	<b>1,390</b>	<b>5,028</b>	<b>1,270</b>	<b>5,255</b>
Pork imports	199	204	237	219	859	201	195	194	213	803	207	191	198	205	801	210	<b>190</b>	<b>200</b>	<b>200</b>	<b>800</b>	<b>210</b>	<b>800</b>
Broiler exports	1,469	1,699	1,643	1,954	6,765	1,527	1,588	1,978	1,879	6,971	1,737	1,791	1,867	1,886	7,281	1,759	<b>1,775</b>	<b>1,875</b>	<b>1,850</b>	<b>7,259</b>	<b>1,850</b>	<b>7,550</b>
Turkey exports	114	136	158	174	582	159	171	173	199	703	181	185	216	180	780	178	<b>195</b>	<b>200</b>	<b>210</b>	<b>783</b>	<b>205</b>	<b>840</b>
Live swine imports (thousand head)	1,446	1,408	1,479	1,416	5,749	1,452	1,429	1,407	1,508	5,795	1,441	1,444	1,387	1,380	5,652	1,326	<b>1,350</b>	<b>1,350</b>	<b>1,400</b>	<b>5,432</b>	<b>1,325</b>	<b>5,425</b>

1/ Forecasts are in bold.

2/ Per capita meat and egg disappearance data are calculated using the Resident Population Plus Armed Forces Overseas series from the Census Bureau of the Department of Commerce.

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

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5/15/2013

## Dairy Forecasts

	2011		2012					2013					2014	
	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	Annual
Milk cows (thous.) 1/	9,216	9,194	9,257	9,259	9,211	9,203	9,233	9,225	N/A	N/A	N/A	N/A	N/A	N/A
Milk per cow (pounds)	5,277	21,337	5,514	5,563	5,284	5,335	21,696	5,475	N/A	N/A	N/A	N/A	N/A	N/A
<b>Milk production (bil. pounds)</b>	<b>48.6</b>	<b>196.2</b>	<b>51.0</b>	<b>51.5</b>	<b>48.7</b>	<b>49.1</b>	<b>200.3</b>	<b>50.5</b>	<b>51.8</b>	<b>49.8</b>	<b>49.7</b>	<b>201.8</b>	<b>51.2</b>	<b>204.6</b>
Farm use	0.2	1.0	0.2	0.2	0.2	0.2	1.0	0.2	0.2	0.2	0.2	1.0	0.2	1.0
Milk marketings	48.4	195.2	50.8	51.3	48.4	48.9	199.4	50.3	51.6	49.6	49.4	200.8	51.0	203.7
<b>Milkfat (bil. pounds milk equiv.)</b>														
Milk marketings	48.4	195.2	50.8	51.3	48.4	48.9	199.4	50.3	51.6	49.6	49.4	200.8	51.0	203.7
Beginning commercial stocks	12.3	10.8	10.9	13.6	14.7	13.2	10.9	12.2	15.1	15.4	13.7	12.2	12.0	12.0
Imports	1.2	3.5	0.9	0.9	1.0	1.3	4.1	1.1	0.9	0.9	1.1	4.0	0.9	3.9
Total supply	62.0	209.5	62.6	65.8	64.1	63.4	214.3	63.5	67.5	65.9	64.2	217.0	63.9	219.6
Commercial exports	2.1	9.4	2.2	2.8	2.0	1.9	8.8	2.4	2.8	2.6	2.2	10.0	2.4	10.3
Ending commercial stocks	10.9	10.9	13.6	14.7	13.2	12.2	12.2	15.1	15.4	13.7	12.0	12.0	14.0	11.8
Net removals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial use	49.0	189.2	46.8	48.3	48.9	49.4	193.3	46.1	49.4	49.6	50.0	195.0	47.5	197.4
<b>Skim solids (bil. pounds milk equiv.)</b>														
Milk marketings	48.4	195.2	50.8	51.3	48.4	48.9	199.4	50.3	51.6	49.6	49.4	200.8	51.0	203.7
Beginning commercial stocks	12.2	12.2	11.8	12.9	12.6	11.8	11.8	12.4	13.5	13.1	11.9	12.4	12.1	12.1
Imports	1.4	5.3	1.4	1.4	1.4	1.5	5.7	1.5	1.3	1.3	1.5	5.6	1.5	5.4
Total supply	62.0	212.6	64.0	65.6	62.5	62.1	216.9	64.1	66.4	64.0	62.8	218.8	64.6	221.1
Commercial exports	8.2	32.5	8.3	9.0	8.3	7.6	33.3	8.3	9.0	8.9	8.5	34.7	8.8	36.4
Ending commercial stocks	11.8	11.8	12.9	12.6	11.8	12.4	12.4	13.5	13.1	11.9	12.1	12.1	11.9	12.1
Net removals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial use	42.0	168.2	42.8	43.9	42.4	42.1	171.2	42.3	44.3	43.2	42.2	172.0	43.9	172.6
<b>Milk prices (dol./cwt) 2/</b>														
All milk	20.07	20.14	17.90	16.43	18.27	21.50	18.53	19.50	19.25	19.60	19.70	19.50	18.40	18.85
									-19.55	-20.20	-20.60	-20.00	-19.40	-19.85
Class III	18.62	18.37	16.28	15.53	17.80	20.17	17.44	17.44	17.80	18.10	17.95	17.80	16.40	17.00
									-18.10	-18.70	-18.85	-18.30	-17.40	-18.00
Class IV	17.72	19.04	15.94	13.86	15.87	18.34	16.01	17.71	18.40	18.55	18.20	18.20	16.95	17.80
									-18.80	-19.25	-19.20	-18.80	-18.05	-18.90
<b>Product prices (dol./pound) 3/</b>														
Cheddar cheese	1.799	1.825	1.559	1.547	1.773	1.952	1.708	1.686	1.755	1.780	1.765	1.745	1.620	1.675
									-1.785	-1.840	-1.855	-1.795	-1.720	-1.775
Dry whey	0.636	0.533	0.646	0.544	0.541	0.643	0.594	0.632	0.560	0.575	0.575	0.580	0.555	0.565
									-0.580	-0.605	-0.605	-0.610	-0.585	-0.595
Butter	1.728	1.950	1.499	1.409	1.684	1.785	1.594	1.555	1.635	1.575	1.530	1.570	1.395	1.485
									-1.695	-1.665	-1.650	-1.650	-1.525	-1.615
Nonfat dry milk	1.461	1.506	1.368	1.170	1.269	1.505	1.328	1.545	1.580	1.625	1.610	1.590	1.535	1.585
									-1.610	-1.675	-1.680	-1.630	-1.605	-1.655

**Note:** Starting in May, contains no data updates or analysis on milk cows or milk output per cow.:<http://www.ers.usda.gov/about-ers/fy13-budget-and-related-ers-actions.aspx>

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

3/ Simple averages of monthly prices calculated by the Agricultural Marketing Service for use in class price formulas. "Based on weekly "Dairy Product Prices", National Agricultural Statistics Service. Details may be found at [http://www.ams.usda.gov/dyfmoms/mib/fedordprc\\_dscrp.htm](http://www.ams.usda.gov/dyfmoms/mib/fedordprc_dscrp.htm)

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

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## Livestock, Dairy and Poultry Outlook: Special Article

# Determinants of Japanese Demand for U.S. Pork Products in 2012

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...Approved by the  
World Agricultural  
...Outlook Board

In 2012, the United States exported almost 5.4 billion pounds of pork products to 113 countries. Of all those countries Japan was by far the largest foreign destination for U.S. pork, as it has been for decades. Last year Japan accounted for over 25 percent of U.S. export volume and over 34 percent of the total value. Even so, Japanese imports of U.S. pork fell almost 7 percent year-over-year in 2012, to 1.4 billion pounds. While such declines are not rare—U.S. exports to Japan have fallen, year-over-year, six times in the last 24 years—lagging Japanese demand for U.S. pork tends to slow total U.S. pork export growth and to create uncertainty with respect to pork export growth potential going forward.

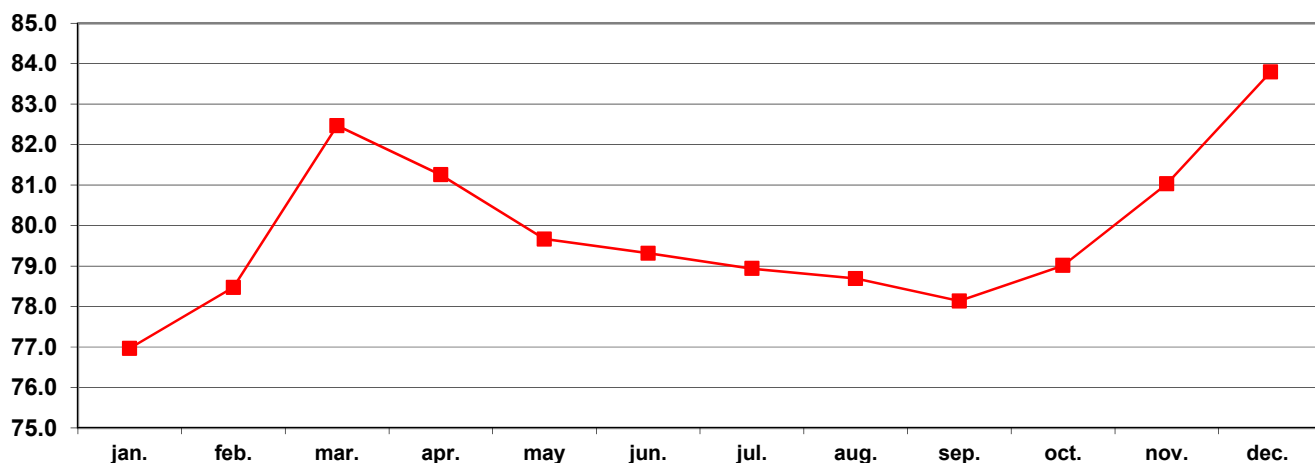
This article examines price and supply variables from 2012 to identify factors that may explain why Japan imported fewer U.S. pork products. Japanese data suggest that two factors in particular—a depreciating yen and increased Japanese pork production—likely explain most of the decline in Japanese demand for U.S. pork last year.

### *Yen-U.S. Dollar Exchange Rate Dynamics in 2012*

The figure below shows the monthly yen-U.S. dollar exchange rate in 2012. The data show that the yen generally weakened last year. It was strongest in January when it cost 77 yen to purchase one U.S. dollar, and throughout the year the yen never strengthened beyond its January level. In December 2012, the exchange rate was 83.79 yen per U.S. dollar, making the yen about 9 percent weaker than at the start of 2012. Increases in the yen price of U.S. dollars such as those in 2012 likely influenced the quantity of U.S. pork products that Japanese importers buy. All else equal, a depreciated yen would incline Japanese buyers to reduce purchases of U.S. pork products.

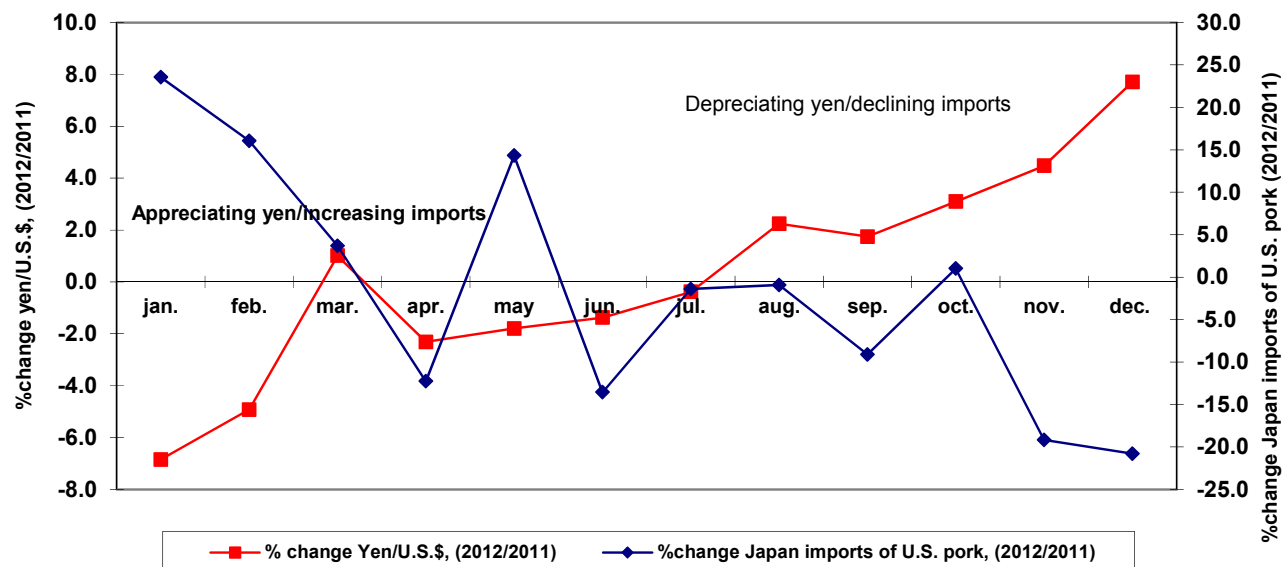
The correspondence between changes in the yen-U.S. dollar exchange rate and Japanese imports of U.S. pork products in 2012 is illustrated in figure 2.

**Figure 1. Yen-US dollar exchange rate, monthly, 2012**



Source: Board of Governors of the Federal Reserve System: <http://www.federalreserve.gov/releases/h10/current/>.

**Figure 2. Year-over-year (2012 / 2011) percent changes: yen per U.S. dollar and Japan imports of U.S. pork**



Source: Board of Governors of the Federal Reserve System. <http://www.federalreserve.gov/econresdata/statisticsdata.htm>; Global Trade Atlas.

The figure shows how a depreciating yen largely corresponds to declines of Japanese imports of U.S. pork products, while an appreciating yen tracks larger Japanese imports. Specifically, the figure shows percent changes—year-over-year—of monthly yen-U.S. dollar exchange rates (red line, read from the left-hand axis) and percent changes in monthly quantities of Japanese imports of U.S. pork products (blue line, right-hand axis). When the line representing percent change in yen per dollar appears below the zero line, the yen price of one dollar is below a year-earlier: the yen has appreciated. When the red line is above the zero line, more yen are necessary to buy one dollar; i.e., the yen has depreciated. The same dynamic is true for the blue line, which represents the year-over-year percent change in monthly Japanese imports of U.S. pork. When the blue line is above the zero line, 2012 imports are above a year earlier. Blue line values below the zero line indicate that 2012 imports are lower than in the same period of 2011. In the figure, an appreciating yen corresponds to year-over-year larger Japanese imports of U.S. pork products, in January and February in particular. A depreciating yen, between July and December, corresponds with a period largely characterized by year-over-year declines in Japanese imports of U.S. pork.<sup>1</sup>

A more complete analysis of the relationship between the yen-U.S. dollar exchange rate and Japanese import demand for U.S. pork products between 2004 and early 2013 is summarized in the table below. While the graphical analysis above shows a rough correspondence, the time series analysis indicates that the two variables are cointegrated. That is, for the period examined, there exists a long-run equilibrium relationship between the yen price of a U.S. dollar and Japanese imports of U.S. pork. Although deviations can be observed between cointegrated variables in the short- and medium- term, partial short-run adjustments are present that return the variables to their underlying equilibrium relationship.

Table 1 -- Times series properties of monthly Japanese pork imports from the United States and yen/dollar exchange rate, 2004-2013

Dickey-Fuller Unit Root Test: Test for Stationarity

	Statistic	Critical Value			Note
		10%	5%	1%	
<b>Levels</b>					
Pork imports 1/	-1.48334	-2.58104	-2.88816	-3.49134	Do not reject: Pork import variable has unit root.
Yen/dollar exchange r	-0.88975	-2.58091	-2.88791	-3.49077	Do not reject: Exchange rate variable has unit root.
<b>First Differences</b>					
Pork imports 1/	-4.67662 ***	-2.58104	-2.88816	-3.49134	Reject: first difference of import variable has unit root
Yen/dollar exchange r	-8.4914 ***	-2.58091	-2.88791	-3.49077	Reject: first difference of ex-rate variable has unit root

Johansen's Cointegration Rank Test,  $\lambda$  max Test Statistic

H0: r = 0, H1: r = 1	20.39544 **	20.26184	Reject hypothesis of no cointegration
H0: r = 1, H1: r = 2	1.89526	9.164546	Do not reject hypothesis of no more than one cointegrating relationship

Note: \* = .10 level (10%) \*\* = .05 level (5%) \*\*\* = .01 level (1%)

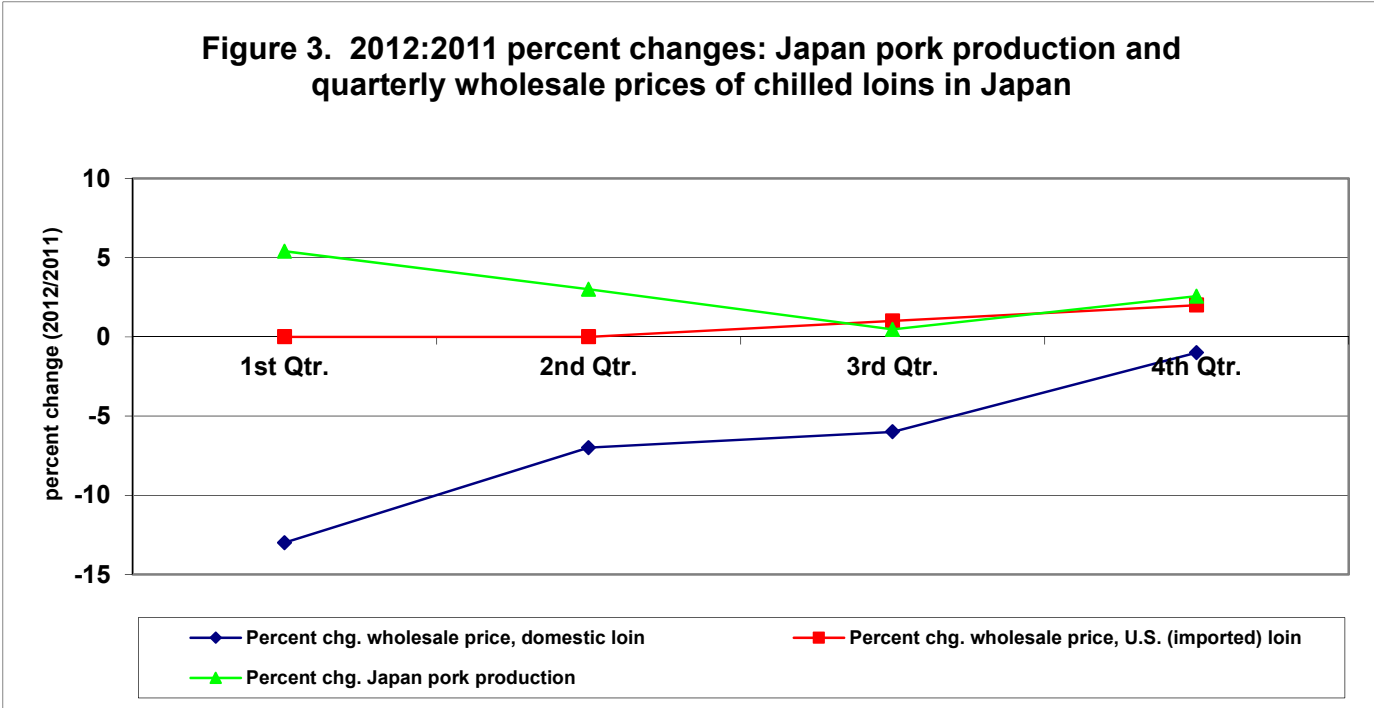
1/  
2/  
Source: Pindyck and Rubinfeld. *Econometric Models and Economic Forecasts*. 1998, and Haley, Stephen L. "Forecasting World Raw Sugar Prices: The Influence of Brazilian Costs of Production and World Surplus/Deficit Measures". ERS, *Sugar and Sweetener Outlook*, 2013.

Both models for the DF test include a constant term, but not a trend. The null hypothesis of the DF test is that the variable is not stationary, i.e. it contains a unit root.

The cointegrating vector in Johansen's test includes a constant but not a trend term. The SIC was used to determine lag lengths. The  $\lambda$  max statistic tests the null hypothesis that the number of cointegrating vectors is zero ( $r = 0$ ) against the alternative of one cointegrating vector ( $r = 1$ ). If this null hypothesis is rejected, the presence of one cointegrating vector ( $r = 1$ ) is tested against the alternative of two ( $r = 2$ ). The  $\lambda$  max test supports the presence of one cointegrating vector between pork imports and the exchange rate.

In addition to exchange rate depreciation last year, Japanese import demand for U.S. pork was likely affected by more than adequate supplies of domestically produced pork. Japanese pork production increased in 2012 for the first time since 2009. Last year’s production increased by almost 3 percent compared with 2011. These production increases appear to be reflected in changes of Japanese wholesale pork prices last year.

Figure 3 shows how quarterly production increases last year (shown in green) correspond with price declines of wholesale prices of domestic loins (shown in blue). By contrast, yen prices of imported U.S. chilled loins (in red) were year-over-year steady in the first and second quarters and increased in the third and fourth quarters when the value of the yen was depreciating. The magnitude of the price declines of Japanese chilled loins, relative to the imported American cut, likely made these products more attractive to Japanese consumers, who are known to demonstrate strong preferences for domestically produced pork.



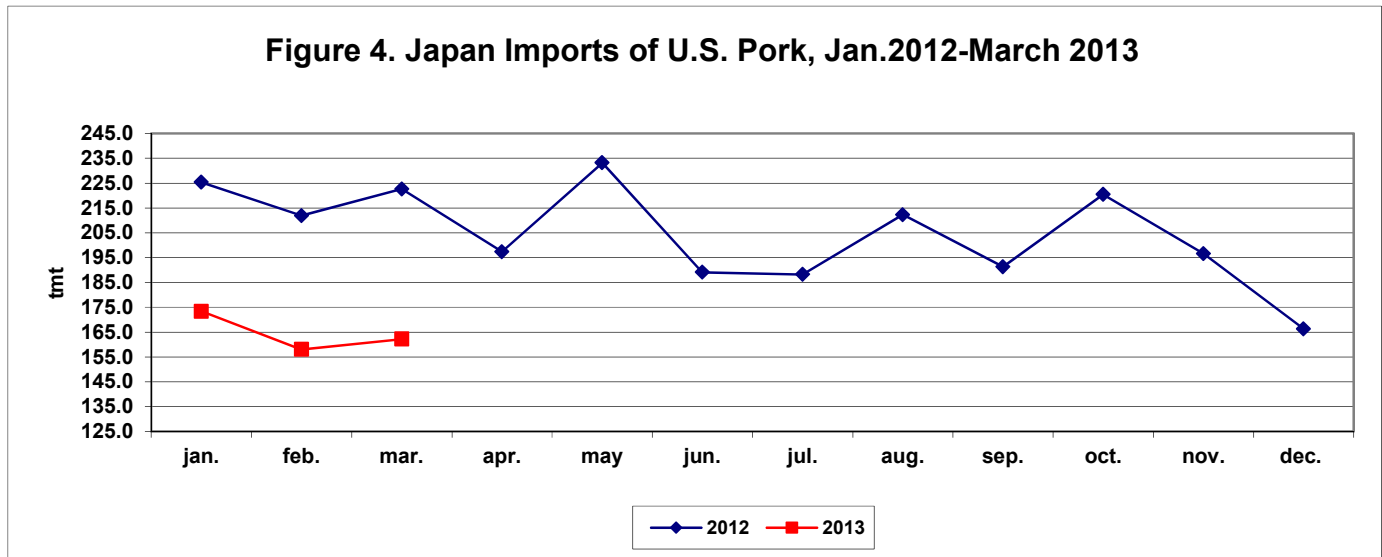
Source: “Japan: Livestock and Products Semi-Annual”, USDA/Foreign Agricultural Service  
[http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Livestock%20and%20Products%20Semi-annual\\_Tokyo\\_Japan\\_3-1-2013.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Livestock%20and%20Products%20Semi-annual_Tokyo_Japan_3-1-2013.pdf).

### *The 2013 Situation Thus Far*

USDA's Foreign Agricultural Service recently published new trade and production forecasts for major trading countries. Japan's total 2013 pork imports are forecast at 1.23 mmt, down more than 2 percent from 2012. Japan's pork production is forecast to increase almost 1 percent this year. <http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1488>.

Consistent with the FAS trade forecast, U.S. pork exports to Japan have had a rough start in 2013. Japanese pork import data for January-March are shown in figure 4. Imports for the 3 months combined are more than 25 percent lower than in the same period last year. Lower imports were likely influenced by further weakening of the yen (fig. 5). The January-March yen depreciation averaged more than 16 percent. Further, Japanese Government data for January and February show that pork production increased almost 1 percent relative to a year earlier. It is also possible that expanded access for U.S. beef beginning in February could displace some imported pork.

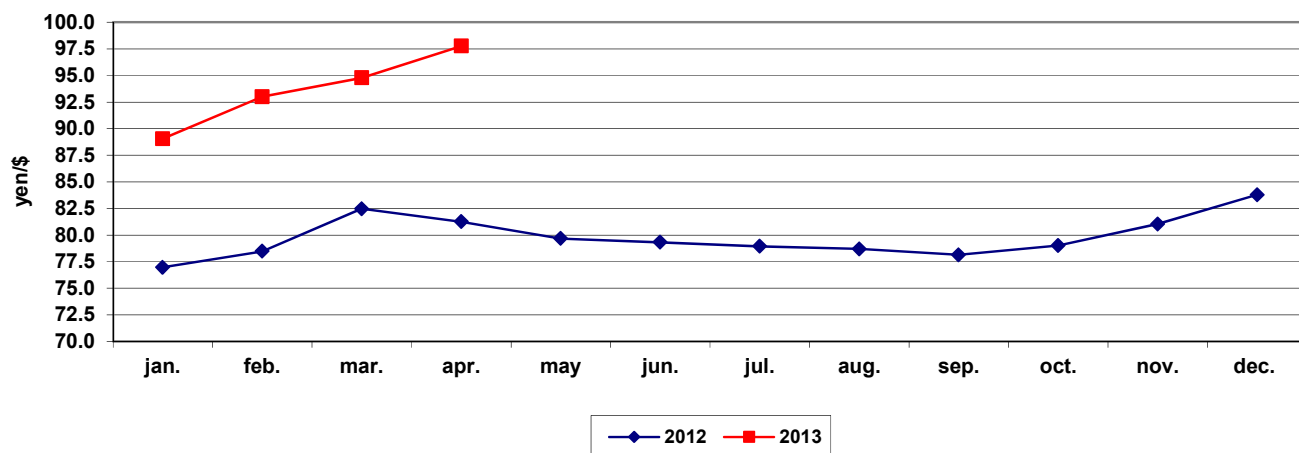
The yen-U.S. dollar exchange rate will in all likelihood continue to create a very challenging market environment for U.S. pork in Japan, particularly given recent policy changes in Japan. In early April, the Bank of Japan announced a new monetary policy, the goal of which is to double the size of Japan's monetary base within a 2-year period<sup>2</sup>. One result of such a policy will likely be a significant increase in the quantity of yen in circulation. Larger quantities of yen are likely to depreciate the currency further, thus auguring continued challenges for goods imported into Japan.



Source: Global Trade Atlas.



**Figure 5. Yen-U.S. dollar exchange rate, Jan.-Apr. 2013**



Source: Board of Governors of the Federal Reserve System; <http://www.federalreserve.gov/releases/h10/current/>.

<sup>1</sup>The graphical analysis broadly assumes that U.S. pork exported to Japan is priced and delivered in the same month. Such an assumption could be violated due to timing of the purchase and/or to shipping and/or customs delays. Moreover, pricing arrangements between U.S. sellers and Japanese buyers are proprietary and may not be clearly reflected in available data. The extent to which such arrangements involve pricing and delivery in different months may compromise graphical analysis.

<sup>2</sup> The Wall Street Journal. “Money Spigot Opens Wider”, April 5, 2013