



Rabobank

Pork Quarterly Q2 2014

Not enough pork to go around!

Disease continues to be the focus of global pork markets in Q2 2014 and is the driving force pushing prices, especially in the US, to record highs. US futures climbed 30% in Q1 and are up 45% over last year. This is challenging pork end users and consumers to source sufficient pork supplies.

China is the exception, as oversupply is expected to continue in Q2. The oversupply situation is being driven by high sow liquidation, which we expect to temporarily increase supply even further before the market finds a bottom in late Q3. The hog-to-corn ratio currently stands at 4.5:1, which is far below industry breakeven levels—estimated at 6:1—and is a good indication of how poor margins are in China.

Instead of the earlier expected 1.3% increase, **global pork production will likely decline in 2014 due to the outbreak of porcine epidemic diarrhea virus (PEDv)** in the US, Mexico, Japan and South Korea. In the US, where the PEDv outbreak has been most severe, we estimate pork production could decline to mid-single digits in 2014 due to hog losses from the virus.

Prices in Russia have spiked after an import ban on EU pork was imposed following the discovery of African swine fever (ASF) in Poland and Lithuania. With North America expected to feel the impact of PEDv for the remainder of 2014, Russia will have few alternatives to fill the void left by the EU.

The key question in many countries: 'Where to source pork?'

China

Liquidation of sow herd to continue as severe production profit losses mount to bring a bottom in prices by the end of Q3



US

Record high and volatile prices for both hogs and cut-out values in Q2 and Q3 due to the potent but uncertain impact of PEDv on production



EU

Robust export demand, lower-than-expected supply and an early spring to offset the impact of lost export to Russia



Russia

Searching for supply after the ASF-driven ban on EU imports, but alternatives are limited due to strong competition and the depreciated rouble



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Global outlook

Not having enough pork to go around will be the key concern in many countries in the coming months. The ongoing spread of PEDv in the Americas (US, Canada, Mexico, Colombia, Peru and the Dominican Republic) and Asia (South Korea, Taiwan and Japan) will have a material impact on supply this summer and likely in the years to come. Exacerbating the problem of tight global supply is Russia's ban on EU pork imports after recent ASF outbreaks, at a time when there are few alternatives and the rouble continues to depreciate (see Figures 1, 2 and 3).

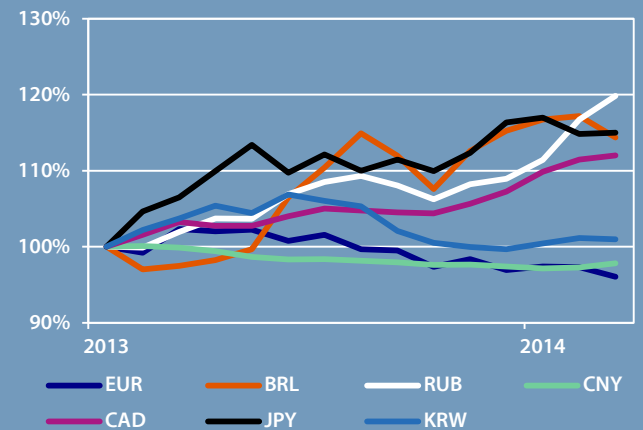
Stress on global pork supplies is currently eased by the supply glut in China, the world's largest producer and consumer of pork. Price pressure will continue in Q2 and Q3 2014, more than a year after the decline in Chinese pork prices began. The sow liquidation, which commenced in April, will drive prices lower this summer as supply and demand rebalance. While China's pork imports increased by 11.1% in January/February relative to the same period last year, we expect import growth to wain as the year progresses. Looking to the back half of the year, the continued sow liquidation should help Chinese pork prices recover by the end of Q3 2014.

In 2014, we expect a significant decline in pork production in the US (6% to 7%) and Mexico (9.7%) due to the outbreak of PEDv, which started in the summer of last year. Producers have not been required to report PEDv cases to the Department of Agriculture, making the impact on production unclear. The impact of PEDv in Asia, especially in Japan and South Korea, is

sizable, but difficult to estimate as the spread of the disease is not known.

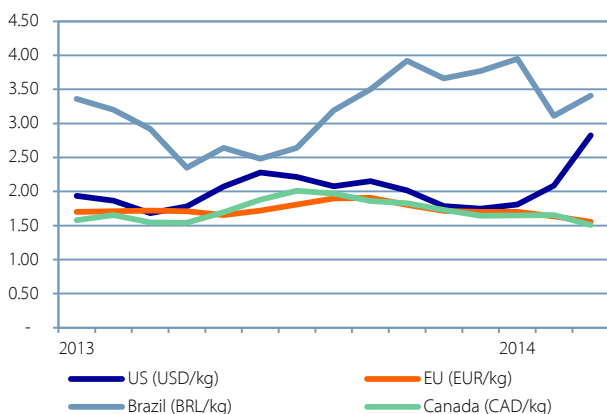
The discovery of ASF in the EU and Russia's subsequent ban on imports from the entire EU has been a challenge to the Russian pork industry. The ban means a loss of 1.3 million tonnes of pork imports, which is about one third of Russia's total import volume in 2013. This has resulted in short supply and higher prices in Russia, mainly for the processing industry, which relies heavily on these imports. Russia is facing a challenging search for additional suppliers, with Brazil and Canada—the most likely suppliers—currently experiencing limited production growth.

Figure 1: Exchange rate index, Jan 2013-Mar 2014 index, Jan 2013 = 100



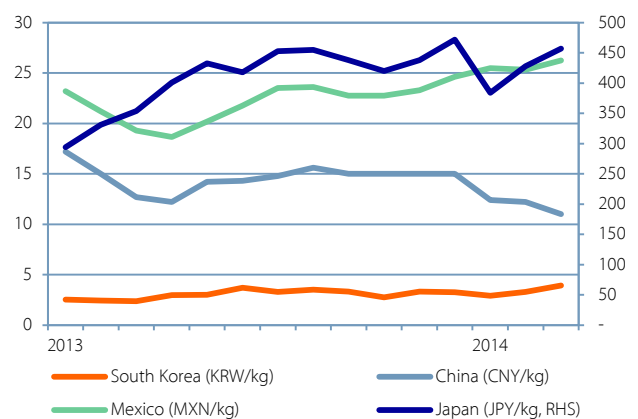
Source: Rabobank based on Oanda, 2014

Figure 2: Pork prices exporting countries, Jan 2013-Mar 2013



Source: Bloomberg, European Commission, Agriculture and Agri Food Canada, 2014

Figure 3: Pork prices importing countries, Jan 2013- Mar 2013



Source: ALIC, Confeporc, MOA, Korean Meat Trade Association, 2014

Regional outlooks

China

In Q1 of 2014, China's pork prices continued to decline, falling to USD 2.8/kilogrammes in March, which was 25% below the September 2013 peak (see Figure 4). Hog prices also declined, falling to USD 1.6/kilogrammes in March, which was 14% below last year and the lowest level in three years. As a result, the hog-to-corn price ratio fell to 4.5:1 in March, which is far below the break-even point of 6:1, indicating a significant loss on the farming side. In many regions, farmers are realising losses of over USD 50 per hog.

China's hog inventory declined by 0.9% MOM in February, to 434.1 million heads, which is 1.1% lower than the same period last year. Sow inventory experienced a similar decrease, falling to 48.7 million heads in February, which is down 0.8% MOM and 3.5% YOY. This reflects the increased liquidation of sows and hogs as farmers are pressured by low prices. However, the pace of liquidation is not fast enough to support a rebound. At the moment, some farmers even continue to expand herd size, as they expect a price recovery will happen very soon.

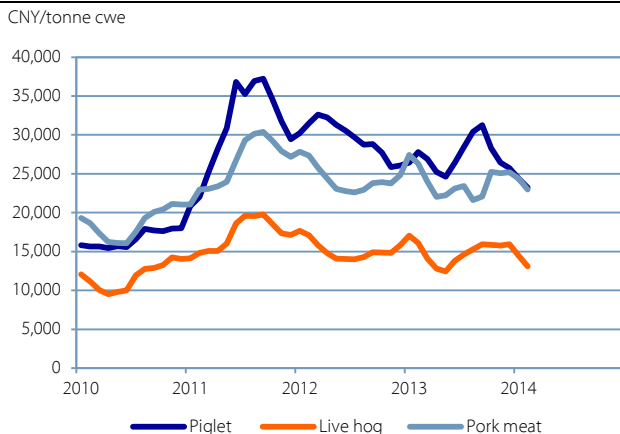
On March 27, the Chinese government took action to procure 65,000 tonnes of frozen pork for the state reserve. However, this is perceived as being only a gesture of support as the amount stockpiled is less than a day's pork consumption across the country and would have a limited impact on supply. However,

this reflects the government's intention to reduce intervention and allow the market to correct the supply situation by itself.

Despite the weak local market, China's pork imports in the first two months of 2014 have increased 11.1% in comparison to the same period in 2013. The US accounted for 20.7% of China's total pork imports in the first two months of 2014, with volumes up 28.0% YOY. Spain and Denmark account for 16.5% and 11.4%, respectively, with volumes up 21.9% and 22.8% YOY. Germany slid to the number four position, with a share of 11.2% and volumes down 45.7% YOY. However, imports are not expected to continue to increase in the coming months. In Q2 and Q3 of 2014, China's pork imports are expected to decline due to the great pressure on supply in the rest of the world and low prices in the local market.

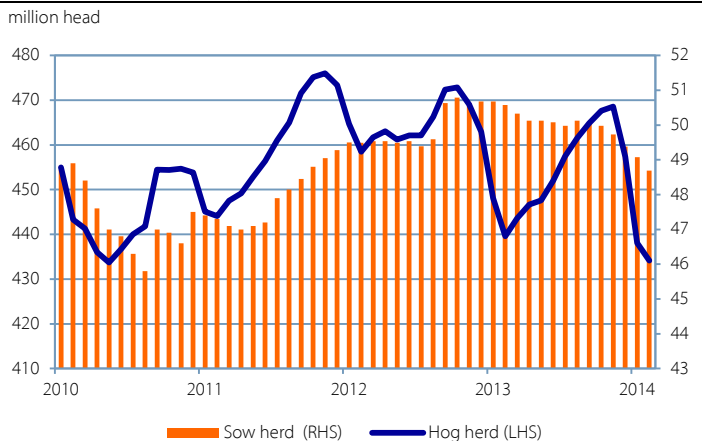
Looking forward, China's pork consumption is expected to remain steady in 2014. Pork prices will stay at the current low level throughout Q2 and Q3 of 2014, and, given the present slow liquidation pace, are not likely to rebound until the end of Q3 or early Q4. Any rebound is not likely to be significant, as hog supply will continue to be at a relatively sufficient level. Disease outbreak remains the largest factor of uncertainty for the market. If there is a major outbreak in the coming months, prices will increase significantly.

Figure 4: Prices of piglets, live hogs and pork in China, 2010-2014



Source: Ministry of Agriculture of China, 2014

Figure 5: Hog and sow inventory China, 2010-2014



Source: MOA, Rabobank, 2014

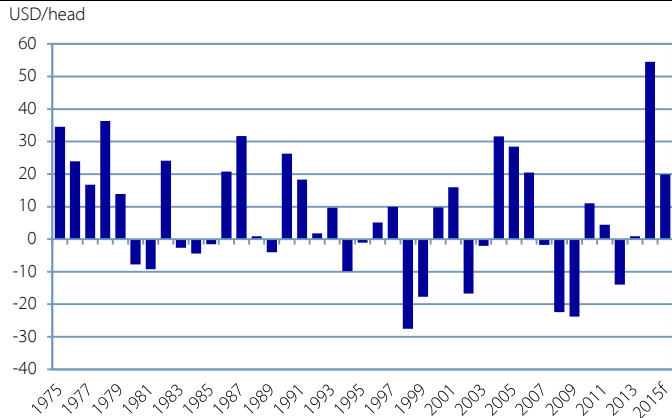
US

Profit margins for US hog producers and pork packers climbed during Q1 2014 as the threat of PEDv intensified, causing a spike in hog and pork cutout prices. Cases of PEDv ended 2013 at 140 per week but climbed to over 300 by the end of Q1 2014, raising the risk of much tighter pork supplies this summer than previously expected. We expect PEDv to continue to spread through the US hog herd this spring, depressing 2014 pork production in the US to the tune of 6% to 7% below 2013 levels.

We estimate hog production margins averaged USD 29 per head in Q1 2014 versus USD 18 per head in Q1 last year, as hog prices have risen and feed costs declined. The futures curve for hogs and grain indicates higher hog production margins for the remainder of 2014 and an annual average of USD 55 per head, which would be the highest margin US producers have seen in more than 40 years. This rosy outlook is tempered by the increased costs required to combat PEDv and the reduced productivity that follows an outbreak.

While hog prices climbed in Q1, the pork cutout rose even faster, driving better profit margins for packers as pork is being stockpiled ahead of the tight supplies expected this summer. However, it seems this trend has now shifted, with the pork cutout stalling in the last two weeks, allowing hog prices to catch up and packer margins to compress. We expect packer margins to be pressured this summer as hog supplies tighten due to the effects of PEDv, and processing plant capacity utilisation declines.

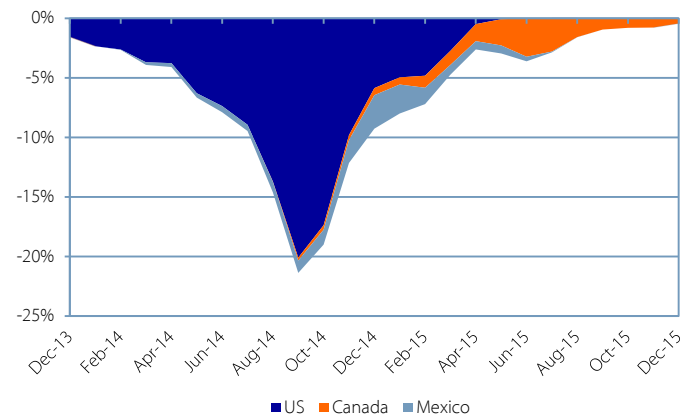
Figure 6: US hog production margin per head, 1975-2015f



Source: J Lawrence Iowa State, Bloomberg, Rabobank Estimates, 2014

A key question for the summer and fall is how the hogs lost due to PEDv this winter and spring will impact hog slaughter and packers. With recent reports of a number of major processors planning to idle operations for at least one day per week, things could get very tight in the regions hard hit by the virus.

Figure 7: Estimated shortfall in market hogs from PEDv as percent of North American slaughter, Dec 2013-Dec 2015



Source: Rabobank, 2014

EU

EU hog prices dropped considerably in February and March after Russia banned EU pork imports due to the discovery of ASF in wild boars in Lithuania and Poland at the end of January (see Figure 8). This is a major loss for the EU pork industry—last year they shipped 1.3 million tonnes to Russia, accounting for 25% of total exports, making Russia the EU's second largest export market. Moreover, 43% of this volume was fat and offal, which made exports to Russia very important for the total carcass valuation.

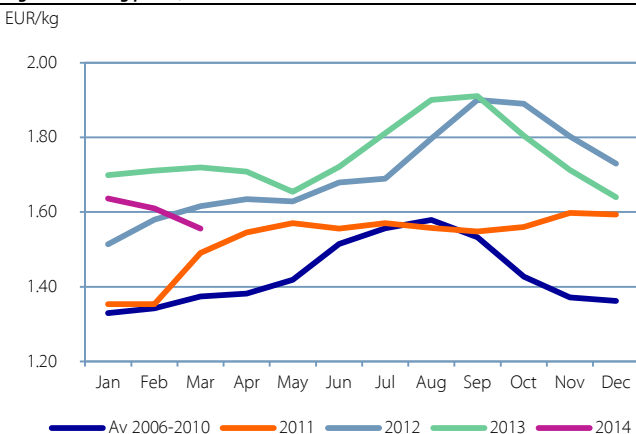
With EU hog prices recovering towards the end of March and into April, the price drop was short-lived due to a combination of a decline in EU pork production of 1.6% in Q1, improved competitiveness of EU pork on the export markets, and an early spring which supported domestic demand for grilling. The EU's improved competitiveness is a result of the outbreak of PEDv in North America and Japan.

This positive trend, along with seasonally rising price levels, is expected to continue in the remainder of Q2 and into Q3. The EU Commission forecasts a 1.7% drop in pork production in Q2, while export demand is expected to remain strong and domestic consumption bottoms out. The positive prospects can be observed by the development of piglet prices, which averaged well above EUR 50 in Q1, a 10.6% increase compared with Q1 2013 (see Figure 9).

The higher hog prices will likely support a much needed margin recovery for specialised European fatteners. In contrast with specialised breeders, which have had relatively good years recently, fatteners have experienced negative or, at best, breakeven margins over the last five years.

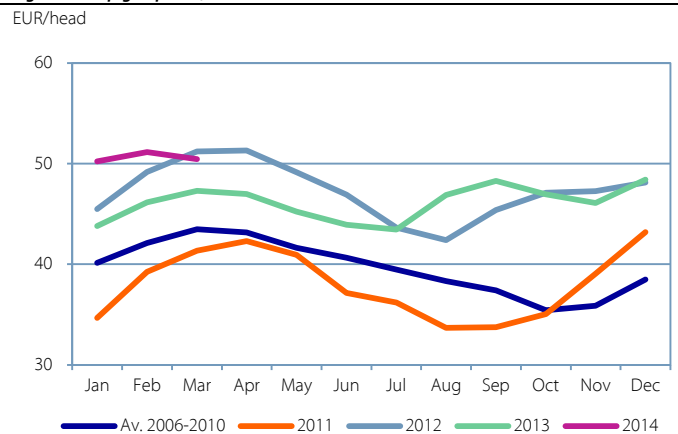
For packers, prospects are improving after a difficult first quarter. However, the upside may be limited due to continuing scarce hog supply and the ongoing challenges regarding carcass valuation as the Russian market will likely remain closed in the coming months.

Figure 8: EU hog prices, 2006-Mar 2014



Source: European Commission, 2014

Figure 9: EU piglet prices, 2006-Mar 2014



Source: European Commission, 2014

Brazil

In the first few months of the year, domestic demand for pork meat in Brazil is seasonally weaker. Lower demand is driven by higher temperatures and reduced available income due to increased spending during the holiday period and various taxes consumers pay in the first months of the year. In 2014, in addition to these factors, the market was also impacted by weak exports in Q1, which further pressured domestic prices.

The political crisis in Ukraine prompted an 89% decline in pork imports from Brazil (basis Jan/Feb 2014 versus Jan/Feb 2013). As a result, Brazil's total pork exports decreased 12% over the same period. Angola, the third most important export destination in 2014, increased imports from Brazil by around 40% (see Figure 1).

Despite the weakness of first quarter exports, domestic prices started to rebound by the middle of March as a consequence of the high prices of competing proteins and improved domestic and export demand (see Figure 2). Meanwhile, supply remained limited, with production in the first two months of the year 15% below the same period in 2013. Prices for March 2014 were the highest recorded for that month since records began in 2010.

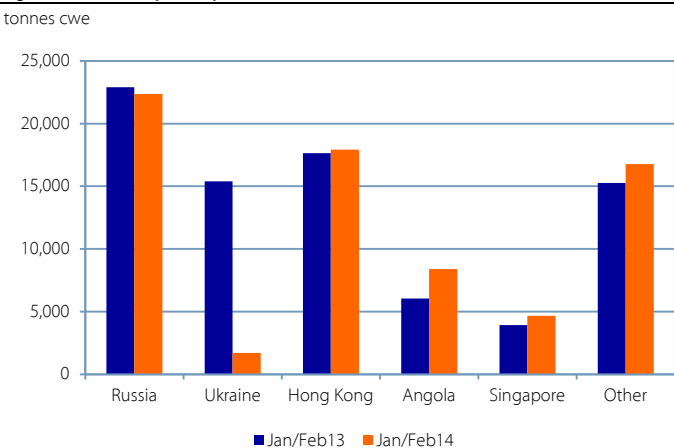
The local swine industry is optimistic regarding the domestic market in the coming months because of the World Cup. It is also optimistic about exports, considering the impact of PEDv in the US and ASF in Europe on world supply.

Russia recently banned imports of pork from the EU, but the country's continued demand for pork has boosted Brazilian exports to Russia since March, when Russia also approved two more pork export plants in Brazil. In total, six factories are now approved, compared to only three last year.

Regarding the PEDv outbreak, the Brazilian Ministry of Agriculture, Livestock and Food Supply (MAPA) is receiving requests from the Brazilian pork industry to suspend US imports of live pigs for reproduction, with the aim of protecting the country against the virus. The fear is heightened now because there are signs that PEDv has already arrived in northern Latin America, although Brazil is safe so far and is working to keep the virus away.

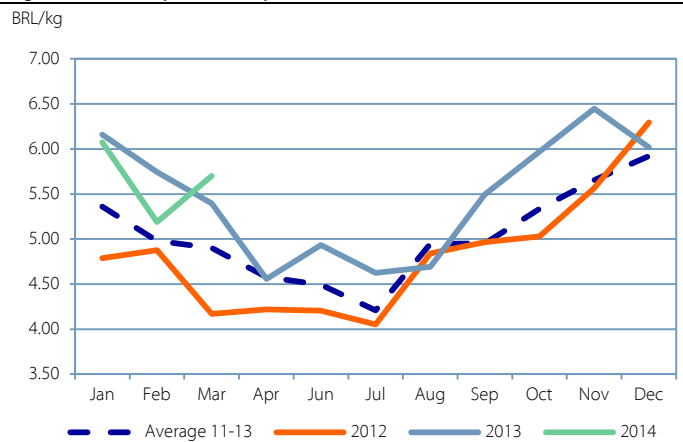
In the domestic market, the Brazilian Association of Producers and Exporters of Swine Meat (Abipecs) projects that prices will remain firm due to lower supply and stable demand. Rabobank believes that this year's production and export numbers will be similar to 2013, suggesting a rebound in both output and exports following the weak performance in Q1 2014. Abipecs is joining forces with the Brazilian Union of Aviculture (UBABEF) to create the Brazilian Association of Animal Protein (ABPA). This new entity should have greater influence on both internal market issues and international trade negotiations.

Figure 10: Brazilian pork exports Jan/Feb 2013-Jan/Feb 2014



Source: ABPA, 2014

Figure 11: Brazilian pork carcass prices



Source: Bloomberg, CEPEA, 2014

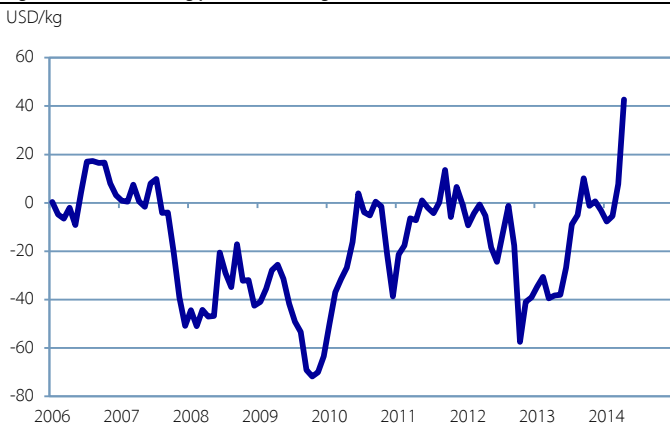
Canada

Similar to the US, Canadian hog prices climbed in Q1, which helped hog production margins reach USD 50 per head in March. However, the move to higher hog prices happened relatively late in the quarter, as profit margins averaged only USD 19 per head for the quarter. Also similar to the US, we expect Canadian producers that are able to dodge the impact of PEDv to have a very profitable year.

The outbreak of PEDv in Canada started in January, about seven months behind the US, and has been mainly in the province of Ontario. Given the general difficulty in containing the virus, we expect PEDv to continue to spread through Canada as it has in the US and in Mexico, supporting higher hog prices this summer. If PEDv in Canada does follow the pace of the outbreak in the US, pork production could begin to decline in late 2014 and through the summer of 2015, but with the virus still in very early stages, it is too early to call.

While PEDv is relatively new in Canada, it has started to impact processing margins, as indicated by the bankruptcy filings of an Ontario pork packer. Quality Meat Packers and Toronto Abattoirs Limited recently filed for bankruptcy protection and cited the run-up in hog prices as a major stress on the company's profitability and cash flow. We could see additional announcements like this across North America by processors who are undercapitalised and operate in regions hard hit by PEDv.

Figure 12: Canadian hog production margins, 2006-2014



Source: Bloomberg, Rabobank, 2014

Japan

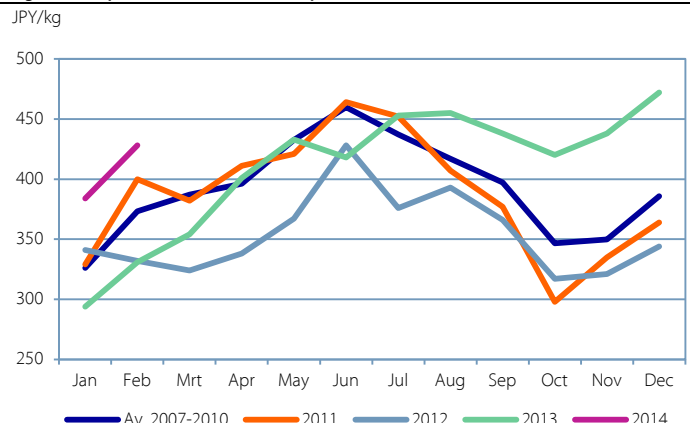
In the course of Q2 2014, the Japanese pork industry will be increasingly challenged by outbreaks of PEDv. Since the virus entered Japan in October 2013, about 186,000 cases in just over 250 farms have been reported. Estimates are that the total number of casualties will reach 40,000.

With the real impact of PEDv expected to hit the market from June onwards, hog and pork prices will rise further following an already very positive 2H 2013 and early 2014 (see Figure 13). The 26% increase of wholesale pork prices in 2H 2013 has been followed by an additional 30% increase in January to February 2014 compared with the same period in 2013.

The lower domestic availability and higher prices of pork will support rising import demand. However, it will be challenging if imports increase. Next to the limited global availability of pork for export, the depreciation of the Japanese yen resulted in slightly higher import prices (0.5%) in 2013 and a substantial decline in the import volume (5.2%).

This situation improved slightly in the first two months of 2014, with a 3.2% increase in imports and a 0.7% rise in import prices. However, with February 2014 imports 1.4% lower than in February 2013, there are no signs of a turnaround. Prices have remained stable in the first months of 2014.

Figure 13: Japanese wholesale carcass prices, 2007-2014



Source: ALIC, 2014

Mexico

A significant number of Mexican hog farms have been exposed to PEDv, particularly in Northern and Central Mexico. Although it is too early to quantify the total impact of PEDv in Mexico, our base case scenario, based on current anecdotal information, estimates a decline of 1.6 million slaughtered hogs by the end of the year. As a result, pork production is estimated to drop by 9.7%.

The majority of the PEDv impact will take place this summer as most farms were infected last winter. This will support a further acceleration of pork prices after Easter and into summer. Prices are then expected to stabilise (see Figure 15). As a result of high pork meat prices, we anticipate per capita consumption at 16.3 kilogrammes, down from 16.6 kilogrammes in 2013. The consumption of other proteins, particularly chicken and some beef cuts, will increase.

Large and efficient hog producers in Mexico have been able to increase weights to extract higher margins, while smaller farmers have been delivering slimmer hogs as they try to cash out their hogs due to high prices.

Assuming the US is able to fulfil Mexico's pork deficit, imports should reach 883 thousand tonnes, up from 778 thousand tonnes in 2013. Mexico's pork meat exports are expected to decline marginally as Mexican producers will prioritise clients in markets such as Japan.

Mexican hog operations, particularly large ones, have eradicated the virus more efficiently as there was already a learning curve in the US and more information has been available. Some integrated hog operations will diminish the negative impact of the virus by bringing in meat from other suppliers and/or by incorporating some other proteins (i.e. chicken and beef) into their portfolios. Furthermore, packers' margins will recover during 2H as pork meat prices are expected to reach record levels after Easter and remain strong through the rest of the year.

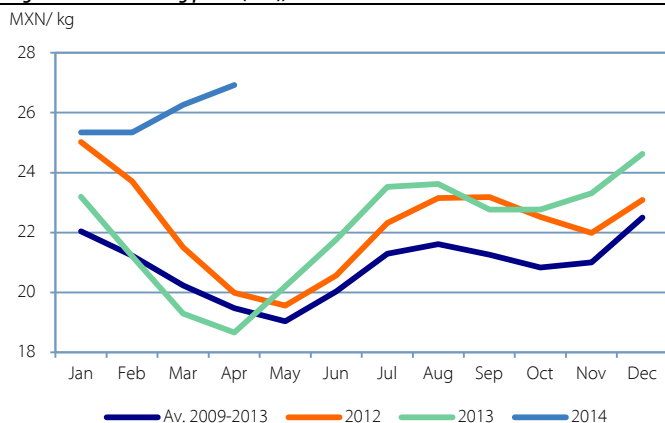
South Korea

The South Korean pork market continued its much needed recovery from low prices driven by oversupply in 2013. The resulting sow liquidation began to positively impact the market towards the end of 2013. This continued in Q1 2014, with hog prices increasing 38% (see Figure 14).

Prices are forecast to rise further in Q2, with domestic supply remaining under pressure. Moreover, some further upside is possible towards the end of the quarter due to the impact of PEDv, which will start to reach the domestic market this period.

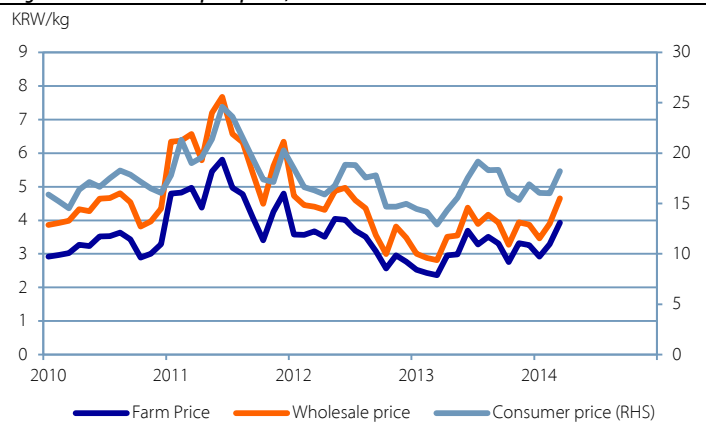
The lower domestic supply will further support import growth. Imports reached 21,190 tonnes in February, an increase of 150% compared to the 8,439 tonne low in September 2013. However, with the US being the main contributor at 10,000 tonnes, import growth will likely slow down, supporting even further price rises.

Figure 14: Mexican hog prices (cwe), 2009-2014



Source: Rabobank, Confeporc, 2014

Figure 15: South Korean pork prices, 2010-2014



Source: Korean Meat Trade Association, 2014

Russia

The Russian pork industry has been heavily impacted by the ban on EU pork imports implemented by Russian authorities after the detection of ASF in wild boars in Lithuania and Poland in January 2014. Without questioning the legitimacy of this ban, it is clear that it has resulted in rapidly rising hog and pork prices and growing shortages of pork in Russia. This is because the EU supplied about one third of Russia's imports in 2013.

Russian pork prices will continue to rise in the remainder of Q2 and into 2H 2014. Domestic supply will continue its steady growth, but this will not be sufficient to cover the lost EU supply. Furthermore, the search for other suppliers will be hampered by the limited global availability of pork for export and the ongoing problems in Ukraine.

The processed meat industry will be especially impacted as most imports are used for processed meat products. There are rumours that plants have slowed down or even stopped production altogether due to insufficient pork supply. Therefore, it seems the Russian processed meat industry is paying the price for the disease being spread around the globe.

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