



**Rabobank**

## Pork Quarterly Q2 2019

***Chinese Pork Production Shortfall Will Require Global Production Response***

### **RaboResearch**

Food & Agribusiness  
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**The spread of African Swine Fever (ASF) into every province in China and throughout Southeast Asia in the last quarter has generated new concerns over the industry's ability to respond to world demand.** Structural constraints on production growth in some regions, along with infrastructure and logistics capacity constraints, may leave the world with limited supply and mounting competition for potential trading partners.

### **China: Producers Remain Cautious on ASF Risk**

As the industry surveys the full extent of ASF losses, the challenges of rebuilding its herd, and the potential for reinfection, markets are growing increasingly concerned with projected production shortfalls. Estimated production losses of 25%-35% are expected to create a supply gap that will be impossible to fill in the short run.

### **US: Industry Takes Precautions – Prepares for Strong Export Demand**

After several months of disappointing returns, US hog producers are realizing a nearly USD 50 per head rebound in profitability. This reversal of fortunes is leading some top producers to reconsider expansion plans. While profitable, the industry remains exposed to potential disruption should ASF enter its borders, or should future access to China not be forthcoming.

### **Europe: Belgian ASF Outbreak Ongoing – Industry is Focused on Containment**

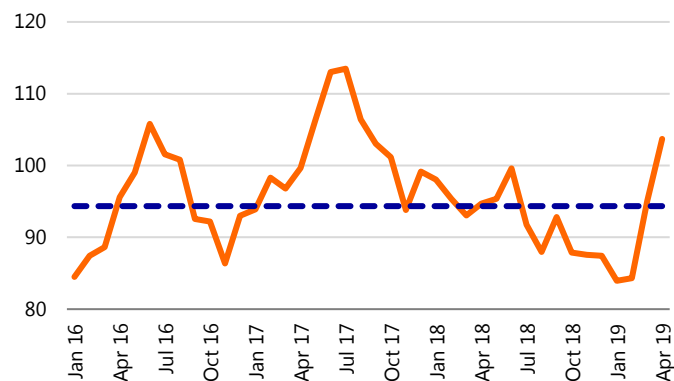
European hog producers remain on high alert, as the risks of ASF threatens the ability to meet rising global trade demand. Rising pork prices and the promise of stronger returns may lead to slightly faster growth in some advantaged regions, but the overall production response is likely to be muted by other structural limitations.

### **Brazil: The Light at the End of a Long Tunnel**

A rebound in global pork is likely to benefit few countries more than export-dependent Brazil. Well-positioned to export to Asia, as well as re-established markets in Russia, Brazilian pork producers should see some of the best returns in years. After many challenging export disruptions, we do not expect the Brazilian pork industry to respond as quickly as some others.

Given the strength of demand in export markets in recent months, global prices have been rising sharply, and we expect this rise to continue during Q2 2019 (see Figure 1).

**Figure 1: Rabobank Five-Nation Hog Price Index 2016-2019 (Jan 2006=100)**



Source: Rabobank (using national statistics), 2019

**Figure 2: Rabobank currency forecast to May 2020**

	May 3	3M	6M	12M
EUR/USD	1.12	1.11	1.1	1.12
USD/JPY	111.2	110	110	108
USD/CAD	1.34	1.34	1.33	1.36
USD/BRL	3.94	3.85	3.75	3.8
USD/MXN	19	19.5	19.8	20.5
USD/CNY	6.73	6.95	7	7.5

Source: Rabobank, 2019

## Feature Story: How Will China Fill Its Supply Gap?

Mounting losses in the Chinese pig herd due to African Swine Fever (ASF) are expected to drive a deficit in pork supplies of up to 16m metric tons by year-end 2019. Until China gains control of the disease and is able to rebuild, however, it will need to look to other protein sources to meet consumers' needs. China will need to expand its production of other proteins and ratchet up imports in an effort to fill the gap (see Figure 4). Ongoing trade disputes and infrastructure limitations, however, may limit China's options.

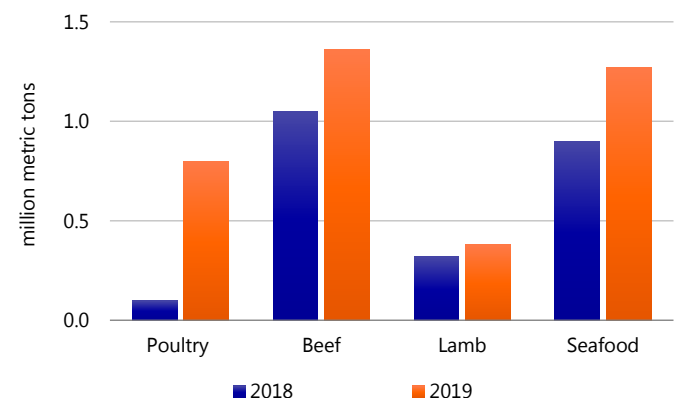
### China's Move Toward Poultry Production

Efforts to expand China's poultry industry (broilers, ducks) are expected to drive 10% growth in poultry supplies in 2019. Poultry accounted for 11% of total protein produced in 2018. Consumers prefer meat from yellow-feathered birds, which is traditionally sold fresh in wet markets. Foodservice and group dining has created some additional demand for white-feathered broilers, yet it remains the

minority. Demand for chicken has already responded to pork shortages, as consumers seek out pork alternatives. Domestic prices are up 76% YOY, which may limit consumer interest. The Chinese industry may have some difficulty in responding to consumer needs given lagging disease challenges and genetic constraints. High Pathogenic Avian Influenza (HPAI) cut chicken production in many regions in 2018/19 and remains a threat. In an effort to protect its industry, China had restricted egg and DOC imports for the past several years. This constraint led to a steady decline in the quality of the domestic flock and a sharp increase in day old chick (DOC) prices. In order to restore industry productivity, a reinvestment in breeding stock and biosecurity will be needed.

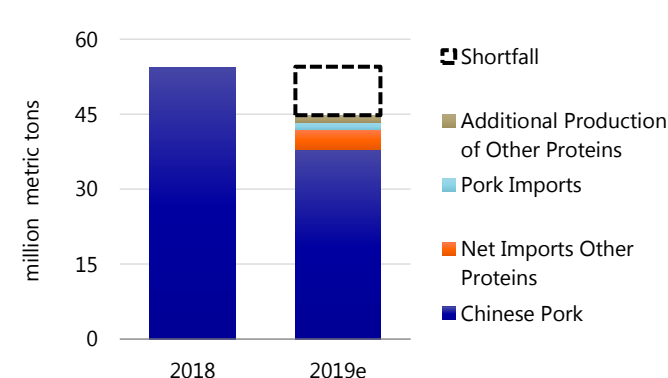
We do not expect a large contribution from increased production of the other proteins (beef, lamb, eggs, seafood) to offset the protein shortfall. We expect small YOY gains in the supplies of all other proteins, contributing an estimated 2m metric tons to total protein availability.

**Figure 3: Net imports of other proteins to increase**



Source: Rabobank, 2019

**Figure 4: Few options to fill China's protein deficit**



Source: Rabobank, 2019

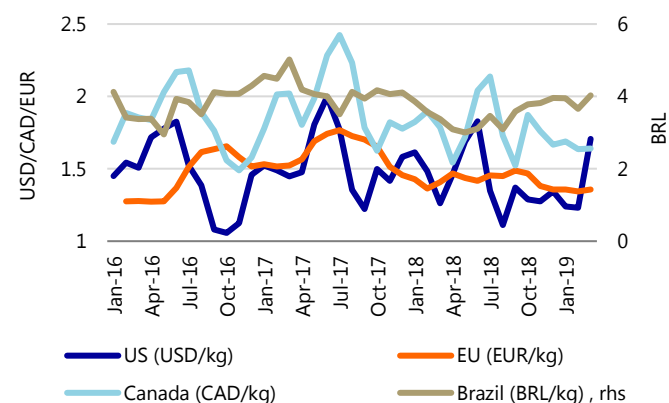
## Pork Exporters Ready to Respond

Leading pork producing nations around the world may be in the best position to benefit from the increase in Chinese pork demand. Exporters could reallocate a portion of their existing trade flows from second or third-tier markets to China. The European Union, China's largest existing pork supplier, is best positioned to expand trade. EU exports to China could increase significantly in 2019, following the trend of 2016/17. Brazil and Canada could also lift exports, given existing relationships. US exports remain constrained by 62% tariffs on trade, and a ban on the use of ractopamine, yet sizable export business has already been recorded in recent weeks. In total, US shipments could exceed 500,000 metric tons of pork to China. Shipments from these key importers, along with supplies from smaller exporters, could offset an estimated 1.5m to 2.0m metric tons of pork demand.

## Imports of Other Proteins Could Help

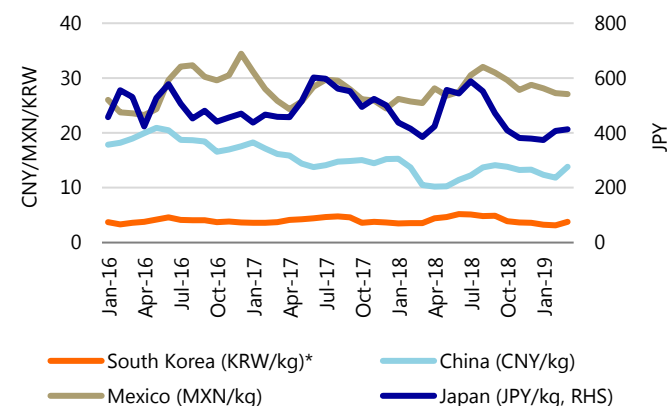
Pork remains the preferred protein, yet imports of beef, chicken, lamb and seafood could help ease the supply gap (see Figure 3). Yet, global supplies of these proteins remain relatively tight, and higher prices will be required in order to stimulate shipments. We estimate that other protein supplies could add over 1m metric tons to local supplies. Trade barriers (like a ban on US chicken) also remain an impediment, but could be reconsidered as the country has lifted similar bans with Russia and France in recent months. Likewise, the ban on the use of growth promotors in cattle could limit US beef exports in the near term.

Figure 5: Pork prices in exporting countries, 2016-Mar 2019



Source: Reuters Eikon, Macrobond, Rabobank 2019

Figure 6: Pork prices in importing countries, 2016-Mar 2019



Source: Reuters Eikon, Macrobond, Rabobank 2019

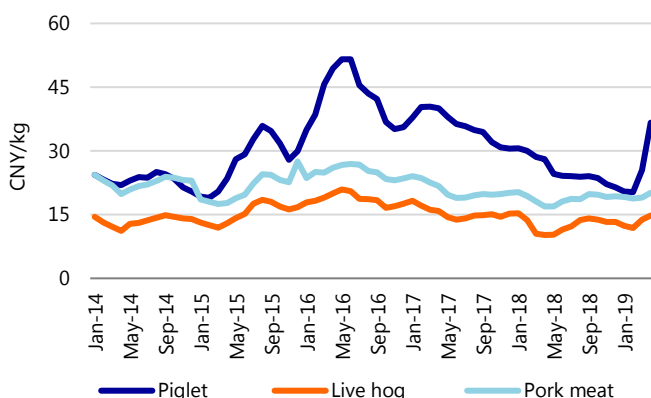
## China

African Swine Fever (ASF) has now spread across the entire country, with the latest cases reported in Xinjiang, Tibet and Hainan Island. Hog production is limited by geographic constraints in these provinces, and pork consumption is also limited. The spread of the virus to even these remote regions suggests that there is no effective control over its spread, even with natural biosecurity. With continued outbreaks, replenishment has been slow. Some small-scale, individual farmers are restocking, while repopulation of larger operations is rare. Provincial surveys of herd loss in some major production regions such as Shandong, Henan, Guangdong have reported sow herd losses of 20%-40% at the end of Jan 2019. As the pregnant sows are more vulnerable to the virus, liquidation of sows has generally been faster than commercial hogs.

Hog and pork prices surged in early March, but have stabilized in recent weeks. In contrast, piglet prices had much stronger performance, remaining above CNY 36 per kg in April, up 44% YOY (see Figure 7). Limited sow and piglet availability remains supportive to price, while the pork market remains well-supplied. Ample pork inventories are a result of ongoing herd liquidation and the release of frozen pork inventories. Slaughterhouses are rapidly reducing pork stocks ahead of governmental inspections for ASF, which are expected between 1 May and 1 July. The China Statistics Bureau reported that Q1 pork production declined by 5.2% YOY. We expect a sharp rebound in pork prices in May, as hog and sow availability will fall and inventories will decline.

In the first quarter of 2019, Chinese pork imports reached 334,000 metric tons, up only 3% YOY. Pork offal imports fell by 22% YOY. Import volumes remain lackluster and are unlikely to strengthen markedly prior to mid-year. We maintain the view that China will significantly increase pork imports in 2H 2019, responding to the surge in domestic prices.

Figure 7: Live hog, piglet and pork meat prices in China



Source: MARA, Boyar, Rabobank, 2019

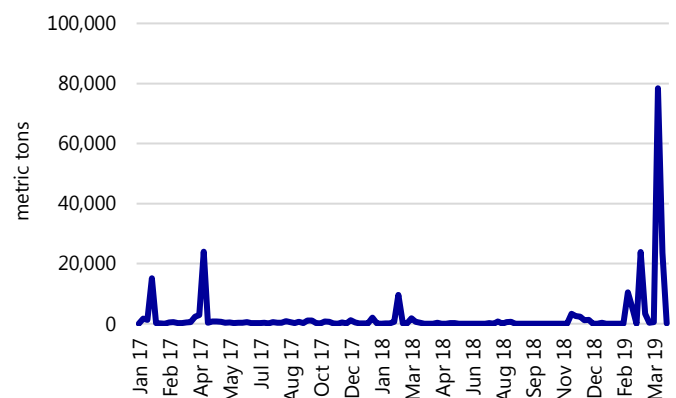
## US

Production trends remain in line with Rabobank estimates for nearly 4% production growth in 2019. A record breeding herd, limited disease pressure this winter and strong productivity gains were supportive of our prior estimates through Q1. Weather-related disruptions have had a limited impact on production, with only temporary plant slowdowns impacting volumes. Holiday-related closures and a temporary maintenance issue has affected volume in recent weeks, but was partially offset as the new Prestage plant ramped up production in the quarter. We expect weekly volumes to stabilize as we head into the summer months. The latest *Hogs & Pigs* inventory report was in line with our expectations for 2% to 2.5% growth. Sharply higher production returns, following the ASF-led rally in hogs, may stimulate additional herd growth in the coming months.

Lean hog futures continue to trade at, or near, contract highs of USD 100 per hundredweight, up over 30% since early March. Record large weekly export sales to China continue to drive expectations for record export volumes in 2019, yet the timing of these shipments remains unknown (see Figure 8). Stronger exports to China should begin in 2H 2019, as inventories are depleted. We remain hopeful that US-China trade negotiations will result in the removal of restrictive 62% tariffs on exports of US pork to China.

Trade volumes were sluggish YTD, with volumes down 5% YOY and down 13% YOY in value. Restrictive trade policies contributed to sharp declines in exports to Mexico, Japan and China. Shipments to Mexico were down double-digits, but values fell by nearly one-third. Exports to Japan also fell (down 9% YOY), as better trade terms for its CPTPP partners and the EU took effect. We remain hopeful that ongoing trade negotiations could level the playing field. Even sales to South Korea started the year weak, but have rebounded on ASF-related concerns.

Figure 8: Weekly US pork sales to China



Source: USDA, Rabobank, 2019

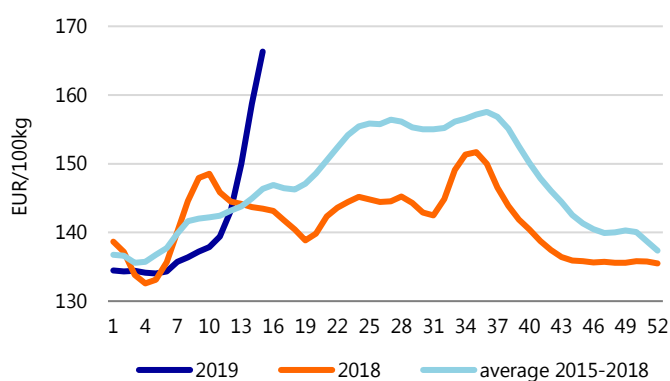
## Europe

Forward price discovery will be the main issue for pork markets in Europe. After a relatively quiet Q1, an unprecedented price rally had observers both excited and nervous (see Figure 9). Piglet prices have continued rising steadily and now sit well above five-year average levels, suggesting ongoing confidence in the market. Recent prices are mostly explained by the optimism of increased exports to China, but stockpiling ahead of Brexit, also played a role.

While sow herd numbers declined in 2018 in the Netherlands and Germany, the Spanish sector continues to expand. This provides the country with a comfortable position to anticipate the current dynamics. Still, we expect the recovery of the Chinese herd to take years, so we also expect large exporting countries in northwestern Europe to increase their herd in 2019, compared to 2018. As a result, we see total pork production in Europe moving up slightly in 2019, over 2018 levels. However, this current positive sentiment will only last if current ASF outbreaks in Europe do not spread into new countries. The ongoing outbreak in Belgium is a reminder that the eradication of ASF is not straightforward.

It remains challenging for Europe's pork supply chains to profit from the current market while also maintaining product flows to support structural, long-term relationships. The price movements we have seen already, and expect to see in the coming quarters, will pressure all players. Production and storage facilities not registered for exports to China will have to cope with higher resource prices without access to this key export market. Local processing companies will also face higher resource prices with limited ability to pass these on, squeezing already tight margins. And rising prices will see some consumers – and food retail and foodservice companies – switch away from pork and possibly not return.

Figure 9: Weekly EU pork price (Carcass Grade E)



Source: European Commission, Rabobank, 2019

## Mexico

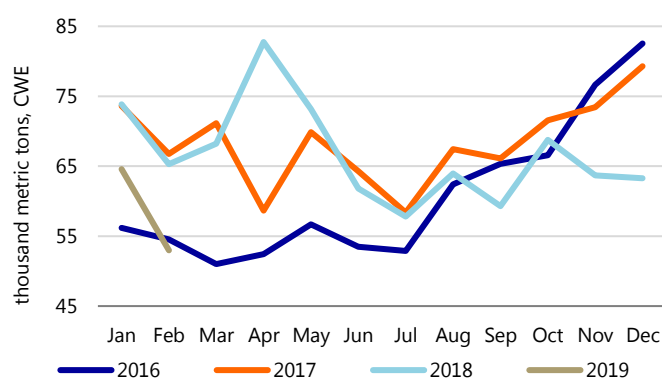
Imports started the year strong, up 5% over year-ago levels (January to February). However, tariffs seem to be taking a toll on US imports as monthly data from the USDA shows that accumulated exports to Mexico are 13% lower from January to February 2019 compared to same period last year (see Figure 9). Canada continues to pick up some of the share lost by the US, with imports totaling 22,000 metric tons, an increase of 58% compared to last year. While imports for 2019 are estimated at 1.2m tons (CWE), the volume could easily be reduced as the impact of ASF could limit the amount available for import.

Production in Mexico continues to increase, with new plants fully operational for over a year. Production in the first quarter increased by 4.9% compared to same quarter in 2018. This record start to the year reflects the rapid expansion of the pork industry in many regions of Mexico. Production is expected to total 1.38m metric tons (CWE) in 2019, up 4.5% from year-ago levels.

Consumption growth remains strong in Mexico, and despite production increasing to new record levels, the deficit continues to widen. While tariffs have taken a toll on imports from the US, overall imports are higher, signaling strong demand (see Figure 10). However, prices could see a lot of volatility in Q3, with demand from China expected to increase due to ASF effects. Consumption per capita this year is expected to average 19kg/capita, however, in volume terms, domestic consumption is expected to grow 4% to a total of 2.4m metric tons (CWE).

Live hog prices are trending lower as current expansion in the industry reflects the increase in production and current seasonal movement in prices in Mexico. However, as we transition to Q2, prices should begin to find some support, with higher domestic demand.

Figure 10: Mexican pork imports from the US



Source: USDA, Rabobank, 2019

## Canada

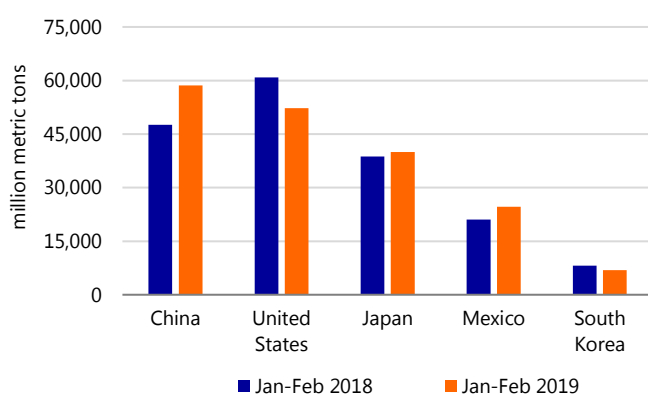
Canada has seen a sharp rebound in hog and pork prices after China stepped up its pork imports. Exports to China are up 33% YOY and are likely to remain well-above year-ago levels in 2019. In recent days, there was some disruption of shipments tied to clerical errors, but at this point it hasn't dramatically affected exports.

Canada's February exports were up 2% YOY, with the boost in shipments to China making the single largest export market (see Figure 11). Shipments to the US were 11% lower, while Canada continues to gain share in Mexico (+18% YOY) to 10.2m metric tons. While smaller in volume, Japan remains the highest value export market at CAD 97m.

With nearly 60% of annual production entering export markets, Canada would be severely impacted if ASF were found domestically. Canada's producers are stepping up efforts to prevent ASF from entering the country, tightening biosecurity at its borders and on farm. Efforts have also been taken to evaluate the vulnerabilities in its supply chain, both in feed and transportation.

Herd growth remains limited and pork supplies are relatively tight. Latest inventories from Statistics Canada were pegged at 14m, with a 1.24m-head sow herd. The pig crop was down 3% YOY in 2018 at 28m head, providing little relief as the nation's processors continue to run well-below (70%-80% utilization) optimal levels. There are still structural limitations on herd expansion associated with animal welfare programs, yet we believe the recent improvement in producer economics may stimulate growth as we move into 2020.

Figure 11: Canadian pork exports, by volume



Source: Statistics Canada, 2019

## Japan

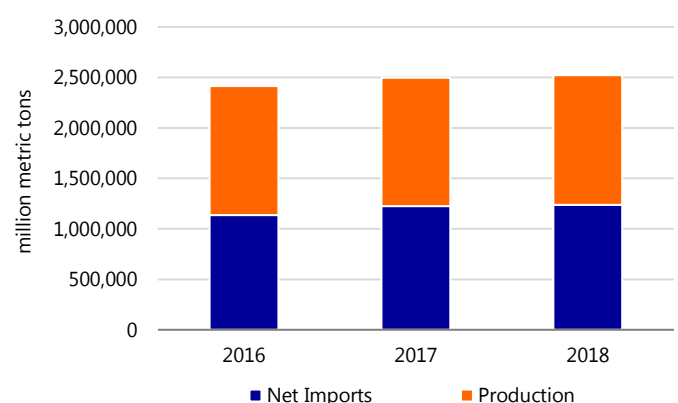
The pork sector in Japan is challenged by two main market events: domestic outbreaks of Classical Swine Fever (CSF) and higher import prices.

Outbreaks of CSF have already affected 20 farms, largely concentrated in the prefecture of Gifu. The disease has been found in both wild boars and in commercial operations and is at risk of spreading further into the country. As the industry struggles to control the disease, it remains reluctant to expand production. The government has tightened controls on the movement of animals and pork, threatening travelers with undeclared pork products with up to three years in prison

Japan's negative trade balance will make the country more vulnerable to global pork shortfalls. In just the last two years, Japan's reliance on pork imports has increased from 47% to 49% (see Figure 12). Given the expected protein deficit on world markets, Japan is likely to see more volatile markets, as it remains exposed to market fluctuations.

The CPTPP trade agreement and new tariff agreements under the recently-signed EU-Japan Economic Partnership Agreement have already led to increased imports of pork from the EU and Canada, to the detriment of the US. Japan remains the leading market for processed, high-value products from the EU. While imports of processed pork from the US have fallen (-15.5% YOY) to start the year, the US remains the leading processed meat supplier. Other countries are gaining share however, with Germany (+45.7% YOY) and Canada (+41.5% YOY), reporting the largest increases in volume so far this year.

Figure 12: Japanese pork supply higher on imports



Source: USDA, ITC Trademap, Rabobank 2019

## South Korea

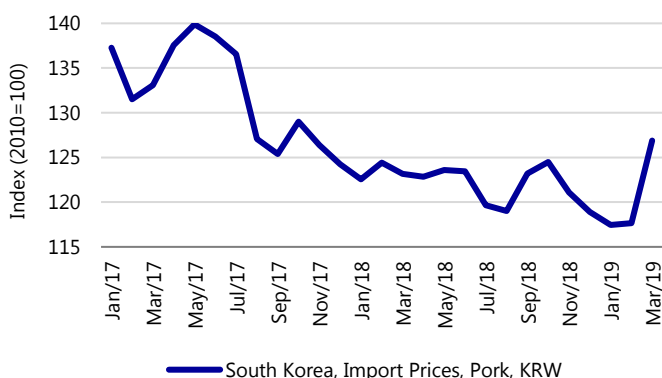
Rumored cases of African Swine Fever in North Korea in recent weeks have raised tensions in the South Korean pork sector. The risk of a possible outbreak of ASF is threatening the country's efforts to increase domestic production.

South Korean pork production has risen 3.8% YOY, to 1.33 million metric tons and, in the absence of an ASF event, is still expected to grow 1.9% over 2018 levels. Despite a growing pork sector, imports still make up over half of the country's pork consumption needs.

Prices of imported pork increased by 7.8% in March (see Figure 13), raising consumer concerns, but not yet impacting pork consumption patterns. Importers are actively working to secure supply from existing trade partners. The EU and North America remain South Korea's largest trading partners, but Brazil could also play an increasing role in supplying the country with product.

South Korea has worked to secure favorable trade terms with its leading partners, recently signing a new bilateral trade agreement with the US. Heightened biosecurity efforts could ultimately lead to an increased reliance on trade. This would make the country even more vulnerable to global pork market shortfalls and volatility.

Figure 13: Pork import prices picked up quickly in March



Source: Bank of Korea, Macrobond, Rabobank 2019

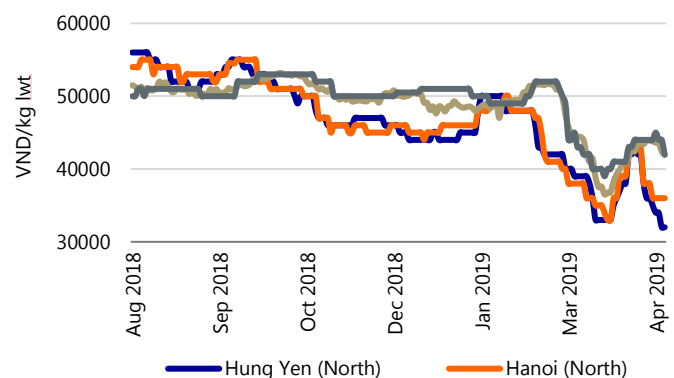
## Vietnam

After two consecutive years of declines in 2017 and 2018, Rabobank expects yet another decline in the Vietnamese sow herd. ASF-related herd losses are expected to result in at least a 10% drop in production in 2019. We expect this reduction to translate into 7% decline in per capita consumption. Since the initial reported outbreaks in February 2019, the losses have moderated as the government aggressively works to contain the spread of the virus. Several districts and provinces have been declared ASF-free in April 2019 (i.e. having no new outbreaks within 30 days). This eases transportation restrictions, and allows breeding, slaughtering, and processing in these areas to return to normal (in accordance with regulations). However, between April 12 and April 21, 2019, new outbreaks were reported in Cao Bang, Ha Long, Ha Nam and Hanoi.

The ASF outbreaks hit smaller, household farms hardest. Swine feed sales have likewise slowed, as hog farms were slow to replenish their stock in the face of lower live hog prices – particularly in northern Vietnam – from farmer liquidation and consumer avoidance. Live hog prices between northern and southern Vietnam have widened again since mid-March (see Figure 14), after new outbreaks were reported in the north. As a result, finishing margins in southern Vietnam remained relatively strong for much of Q1 2019. Yet, with anticipated lower supply in 2H 2019, we expect fattening margins throughout Vietnam to gradually improve. Landed feed costs YTD have remained stable.

This year, higher pork imports are anticipated to compensate for the domestic supply shortage – subject to availability and pricing. As a close substitute, chicken imports have already grown. Based on UN ComTrade data, Vietnamese chicken imports saw a significant 123% YOY jump to 90,700 metric tons in Q4 2018, and we expect chicken imports to remain high in 2019.

Figure 14: Vietnamese live hog prices



Source: Anova Feed, Rabobank 2019

## Brazil

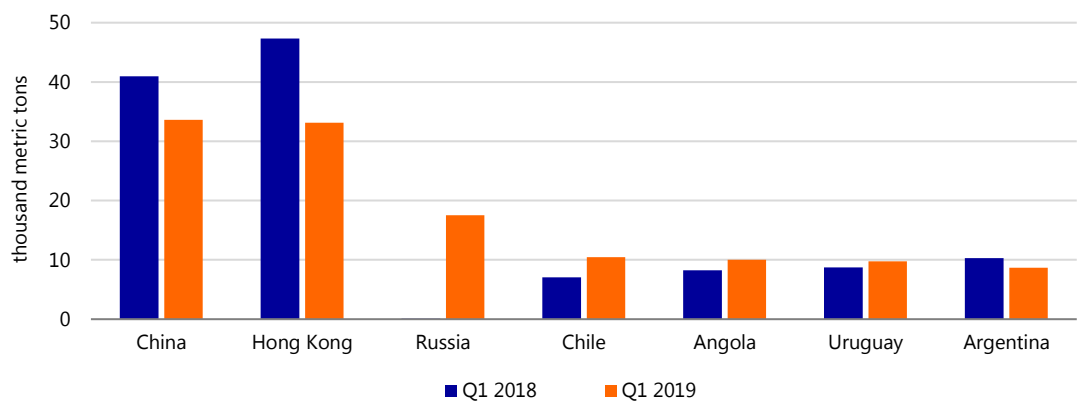
Brazilian pork exports were essentially flat in Q1 2019, compared to Q1 2018. After having increased by 220% in 2018, reaching more than 155,000 metric tons, Brazilian pork exports to China declined by around 17% during Q1 2019 YOY. We expect shipments to resume their rapid pace soon, given Brazil's ample pork supplies and China's growing pork needs.

Trade with Russia is also of growing importance, following the withdrawal of its embargo on Brazilian pork in November 2018. Since that time, Russia has bought around 17,500 metric tons of pork (see *Figure 16*). Still, as only a small number of Brazilian plants are allowed to export pork to Russia, it is unlikely that Brazil will easily return to levels posted in 2017 (above 250,000 metric tons) in the near term. Based on the current pace of exports, Brazil could export roughly 70,000 metric tons of pork to Russia in 2019 – compared to less than 7,000 metric tons in 2018.

On supply, pork production in Brazil is expected to increase between 4% and 5% in 2019. Improving prices in global markets, along with improved domestic demand, are encouraging the rebound in production. However, if global shortfalls widen, it could incentivize more rapid production growth.

After a relatively weak start in early 2019, pork prices are now 25% above year-ago levels, achieving BRL 6.20/kg. At the same time, feed costs fell 7% YOY, after a strong second crop corn harvest. The outlook for stronger global markets, better pricing and lower costs is expected to drive a strong year for Brazilian hog producers.

**Figure 15: Brazilian pork exports (selected destinations)**



Source: Secex, Rabobank 2019



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