

Pork Quarterly Q3 2017

The EU, Canada, and the US Battle for China's Pork Market as Its Imports Slow

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Global pork trade is facing new dynamics, driven by price developments, new trade deals, and more challenging business environments. While China's imports have begun to slow down, other traditional importing countries have reported significant growth. Looking to 2H 2017, global pork supply is expected to increase further, and competition for global consumers will intensify. This potential softening bias on prices contrasts with the stability of the Rabobank Five-Nation Hog Price Index (see Figure 1).

China: production recovery

China's pork production is expected to increase by 2% in 2017. We expect short-term oversupply in 2H 2017, as a result of environmental policy implementation. This will cause prices to fluctuate, with a downward trend. Total imports are expected to decline by 10% in 2017.

EU: slower exports due to strong prices

Tight supply and firm demand are maintaining upward pressure on prices and starting to challenge exporters. In this context, the recently announced trade pact with Japan, offering tariff reductions, is good news for European exporters.

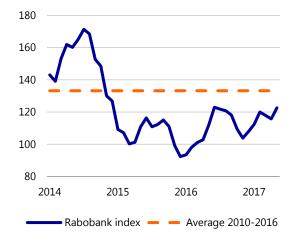
US: uncertain outlook on political front and new plant capacity

US pork exports still face uncertainty due to potential trade policy changes and a strong currency (see Figure 2), but have been better than expected thus far in 2017. With weaker demand from China offset by stronger demand from Mexico, total exports are expected to increase by about 10%, compared with 2016.

Brazil: political turmoil continues to impact

Brazil faces great challenges due to political turmoil, and exports in recent months have declined significantly. However, even with these challenges, Brazil's pork market is still expected to deliver a positive result, due to lower supply and favourable feed prices.

Figure 1: Rabobank Five-Nation Hog Price Index, 2014-2017 (Jan 2006 = 100)



Source: Rabobank (based on national statistics) 2017

Figure 2: Rabobank currency forecasts to July 2018

	10Jul	3M	6M	12M
USD/EUR	1.14	1.14	1.15	1.17
USD/JPY	114	112	112	114
USD/CAD	1.29	1.30	1.29	1.33
USD/BRL	3.28	3.40	3.30	3.35
USD/MXN	18.1	19.0	19.5	19.0
USD/CNY	6.81	7.00	7.25	7.75

Source: Rabobank 2017

What to watch: new trade patterns emerging

China's imports declining

In the first five months of 2017, China's pork imports were flat, which contrasts with the significant growth seen in 1H 2016. The recovery of local production and strong international prices is believed to be responsible for slower imports. In China, pork prices have declined by 30%, from the record levels of last year. As a result, Chinese traders are taking a more cautious approach to imports in 2017.

China's import pattern in the first five months provides an interesting perspective on how to view China's total imports in 2017. In the first three months of 2017, imports increased strongly, by 20% YOY. But imports slowed in April and May, with volume declining by 10% and 22%, respectively, YOY. Imports are expected to continue this softening bias in the coming months, as domestic prices were down in Q2. We forecast that total imports for 2017 will be down 10%, compared with 2016, to reach a total of about 2.8m tonnes, including meat and offal (see Figure 3).

We hold our view that China's pork production will increase by about 2% in 2017. Hog production recovery was faster than expected in 1H, as many producers shared a positive view of the market and made rapid herd replenishments. While the expansion of hog production should continue in 2H 2017, it has been slowed by the price plunge in Q2.

US plant expansion driving export imperative

The US pork market has been expanding for a few years now, but the expansion takes a new shape in 2017 as two new plants come online late this summer. These plants will add approximately 7% to US packing capacity and couldn't come at a better time (see Figure 4). As hog numbers have climbed in recent years, plant capacity has struggled to keep up, leaving capacity in short supply come late Q4, when hog numbers are at their seasonal peak. The capacity expansion story doesn't end in 2017, as one of the plants opening this year will add a second shift in the summer of 2018, and another large plant will open in early 2019.

Figure 3: Chinese pork import forecast, 2009-2017f

Today, the US pork exports about 23% of production, but this number will need to grow, as increased hog supplies will struggle to find a home in the domestic market, where per capita consumption has been largely flat for more than a decade.

Europe pricing itself out of export markets

Pork prices in Europe were strong in Q2, reaching levels not seen since 2013. Firm demand on a tight supply base has been the main cause.

Europe's growing dependence on exports is well established—exports surpassed 10% of production in 2011, and the export share is set to keep growing. The closure of Russia's market for a further year was announced at the same time a new trade pact with Japan was agreed upon, offering more change to the pork trade. However, high local prices have the potential to challenge Europe's position in trade markets. Prices in Europe are materially higher than in Brazil, Canada, and the US, the main competitors in export markets. Europe's share of China's imports has dropped in 2017, as trade competitors benefit from Europe's relative price disadvantage.

Brazil's political turmoil challenging exports

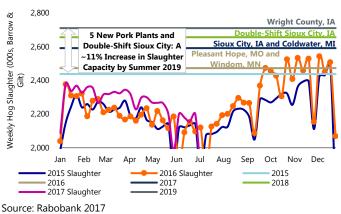
Brazil's meat sector has been dragged into the political turmoil in 2017. In March, the federal police investigation into irregularities in meat inspection resulted in most of Brazil's importing countries placing temporary restrictions on Brazilian beef, chicken, and pork imports.

In mid-May, when business was apparently getting back to normal (important restrictions had already been lifted), a second, and bigger, shockwave arrived. Since then, the largest Brazilian meat player has been at the centre of allegations about corruption involving a number of politicians. As a result, the Brazilian meat industry's image has been adversely affected. Pork exports declined by around 4% YOY in the first five months of 2017, opening some space in the global market for other exporters.

3,500 2,800 2,100 1,400 700 2009 2010 2011 2012 2013 2014 2015 2016 2017f

Can imp.

Figure 4: US hog slaughter forecast, 2015-2019f



■ EU imp. ■ US imp.

Source: Rabobank 2017

Other imp.

Brazil imp.

Dashboard

Legend and units

Production	Exports	<i>Imports</i>	Hog price	Piglet price	Feed price
1,000 tonnes carcass weight equivalent (CWE)			kg CWE	Head	kg

 Δ = year-on-year change

All prices in local currencies

EU: prices remain high due to declining supply, but elevated prices are affecting exports

Production \(\sqrt{\text{Y}} \) To decline	Exports 🟠 To decline	Hog price <page-header></page-header>	Piglet price < ✓ Rising	Feed price To stabilise
Apr: 1,803 <u>△ -7.3%</u>	Apr: 278 <u></u>	May: 1.74 △ +27.2%	May: 58.77 △ +47.2%	June: 0.24 \Delta +3.3%
YTD: 7,716 <u>∆</u> -2.2%	YTD: 1,287 <u></u>	YTD: 1.61 Δ +24.3%	YTD: 55.00 Δ +36.0%	YTD: 0.25 Δ +2.2%

China: slow replenishment underway, with import demand softening

Herd (Feb) 🖊	Imports 耸	Hog price 角	Piglet price 🦊	Corn price 耸
Up	Growth to slow down	Down	Down	Decline due to policy reform
Hogs: 360 △ -0.16%	May: 119 <mark>△ -26%</mark>	May: 14 <u>△</u> -30%	Mar: 38 Δ -23%	May: 1.7 <u>△</u> -10%
Sows: 36 △ 2 %	YTD: 572 △ + 0.7 %	YTD: 15.9 △ - 18 %	YTD: 40 <u>∆</u> -14%	YTD: 1.58 ∆ -16%

US: supply growth picking up by summer's end

Production <a>P Bottoming	Exports <a> Strong start to the year	Hog price < ✓ Plateauing through summer	Piglet price Lifting	Feed price A modest tailwind
May: 951 Δ +7.5%	May: 233 Δ +12%	May: 1.88 Δ +5%	June: 0.7 Δ +2%	Jun: 0.86 <u>A</u> -14%
Jan-May: 174,760 Δ +3.1%	Jan-May: 1093 △ +14%	1H: 1.59 <u>∆</u> +4%	1H: 0.6 ∆ +9.4%	1H: 0.89 <u></u>

Feed price: 83% corn, 17% soymeal

Canada: 2017 has been a strong year, with ongoing trade growth

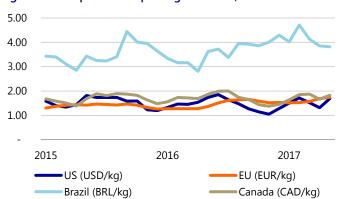
Production <a>P Strong start	Exports 🗸 Climbing	Hog price <page-header></page-header>	Piglet price Prices are starting to rise	Feed price Bottoming
May: 158 △ +10%	May: 112 ∆ +10%	Jun: 2.28 ∆ +4.5%	June: 0.72 △ flat	Jun: 0.90 <u></u> -10 %
1H: 1017 ∆ flat	Jan-May: 544 △ + 4.5 %	1H: 1.50 △+5 %	1H: 0.68 Δ +12.8%	1H: 0.90 <mark>△ -7%</mark>

Feed price: 83% corn, 17% soymeal, Herd: million head

Brazil: feed prices sustaining positive results during 2017

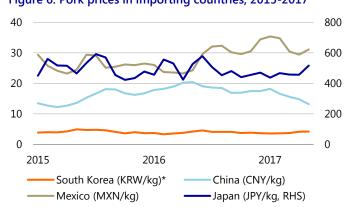
Production Expected to slow in 2017	Exports • Expected to stabilise	Pork price Expected to decline in Q3	Hog price → Expected to decline in Q3	Feed price SExpected to decline in Q3
Mar: 321.9 ∆ +2.2%	May: 47.8 <u>△</u> -24%	May: 6.48 △ +23%	May: 4.02 Δ +24%	May: 0.63 <u>△</u> -41%
Jan-Mar: 899.4 △ +1.0%	Jan-May: 272.5 <u></u> △ -4.1 %	Jan-Mar: 6.82. △ +27%	Jan-May: 4.56 Δ +29%	Jan-May: 0.67 <u></u> ∆ -27%

Figure 5: Pork prices in exporting countries, 2015-2017



Source: Bloomberg, European Commission, Agriculture and Agri-Food Canada, Rabobank 2017

Figure 6: Pork prices in importing countries, 2015-2017



^{*} Note: For display purposes, the South Korean won has been divided by 1,000. Source: Agriculture & Livestock Industries Corporation, FND, Chinese Ministry of Agriculture, Korea Meat Trade Association, Rabobank 2017

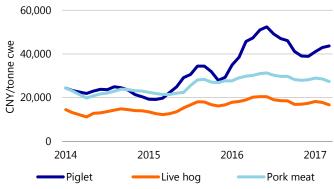
China

China's hog price dropped in May and early June, hitting a low, at CNY 12.5/kg. After being depressed for one month, prices rebounded to CNY 14/kg, but are still 30% lower than the same period of 2016 (see Figure 7). Current prices enable sow-to-hog integrated farmers to make a reasonable margin of about CNY 180/head. But specialised fattening farmers have already started to make losses due to high piglet prices six months ago. Despite this, we believe the supply/demand relationship is still largely balanced, and prices should be stable over summer. Entering Q4 2017, however, many local governments may speed the implementation of environmental policy in order to achieve their goals for the year. This will result in the closure of more small hog farms and the culling of more hogs than normal. The rising hog supply will place downward pressure on prices.

The leading four hog-farming companies in China increased hog production by 19% YOY in the first five months of 2017. This highlights how the expansion of hog production in China is being driven by large-scale farms. The investment will likely continue over the next few years, but at a slower pace. Overall, the additional hogs coming from larger farms will likely exceed the loss incurred by the closure of farms due to environmental policies.

Pork meat imports in the first five months of 2017 were flat, compared with the same period of 2016. While the EU remains the largest supplier, its share in China's total imports declined, from 72% in the first five months of 2016 to 65% in 2017. Germany and Denmark are the main contributors to this decline, while Spain has actually increased exports to China by 20%. In America, shipments from Canada have significantly increased, by 55%, but the US export to China decreased, more than offsetting the additions by Canada. Due to the expected strong prices in international markets and the continued recovery of domestic production, China's import will continue slowing down for the rest of the year. We previously forecast that Chinese pork import in 2017 would likely remain the same, or decline slightly, from the record of 2016. Now we are adjusting our forecast of the total import in 2017, predicting a decrease of 10% compared with 2016.

Figure 7: Chinese prices of piglets, live hogs, and pork, 2014-2017



Source: Chinese Ministry of Agriculture, Rabobank 2017

US

Volatility in the US hog markets seen in the last few months of 2016 and early 2017 continued through Q2 (see Figure 8). The clearest indication of this has been hog-producer profitability, where spot margins started the year in the red at -USD 20/head, climbed to positive USD 20/head by the end of February, back into the red through April, and are now at highs for the year. We estimate current producer margins at close to USD 50/head: the highest level since the PEDv outbreak of 2014.

The backdrop to this price volatility is generally strong demand, both domestically and internationally, for pork. Retail pork prices are up close to 5%, according to the USDA, and exports are up close to 15% on a volume basis. The simple math is that, through 1H 2017, hog numbers are up about 3.5%, but with lower weights: a trend we've seen for three years now. Pork production is up just 3%, which has all gone to export markets. Per capita pork availability in 1H is down by nearly 1.5%, which has helped to boost prices at retail, and for packers and producers.

The export story thus far in 2017 has been interesting. We entered the year concerned that the political environment in Washington could mean serious headwinds for pork exports, given the US's exposure to Mexico, Canada, and China. Downside risks to China's pork imports also seemed stronger than upside risks. So far, the story has been better than expected, with exports to Mexico up by 28%, Canada volumes flat, and China down 17%. While the China figure may be concerning, if volumes stay at current levels, then exports to China in 2017 will be down just 10% vs. 2016. Recent news about renegotiating trade access to South Korea could create another negative chapter in the US trade story.

We expect pork supply growth to continue at the 3% that we have seen thus far in 2017, but do see some headwinds to prices. First, export growth is slowing, with just 8% growth in April, and the US consumer will have to take on some of the increased supplies in the back-half of the year. Second, two new plants are coming online at the end of Q3, which is necessary to efficiently process the coming fall hog run. Hog prices in September and October 2016 indicate the fear of slim available packing capacity, which we think could play out again as Q4 starts this year.

Figure 8: US lean hog futures, 2015-2017



Source: Bloomberg, Rabobank 2017

EU

Europe's pork industry has been governed by rising prices in 2017. Prices continued to climb through Q2 2017, albeit at a slower pace than seen in March/April, and now sit about 12% up year-on-year (see Figure 9). Tight supply and firm demand—locally and in export markets—are the main drivers. We expect prices to peak in Q3 2017 and then soften through 2H 2017, following their typical seasonal pattern. Piglet prices have already retreated from the near-record highs they reached in April, indicating a supply increase is on its way.

Higher prices are supportive of farmers' margins, which have been rising for most of 2017. At the same time, higher prices are squeezing processor margins, especially for processors with fixed-price off-take contracts. Further processors are also likely to find higher prices difficult to pass on in competitive retail and foodservice markets. Exporters are also challenged by higher prices—prices in Europe are currently more than 10% higher than in the US, and even higher against those in Brazil and Canada.

Pork production was down slightly in Q1 2017, by 0.5% YOY, with Germany, Denmark, Poland, Italy, and the UK all recording reductions, while the Netherlands, Spain, and France posted increases. A slight decline in production is expected for the full year, reflecting the reduction in the herd recorded during 2016. With poultry and beef prices tracking below five-year average levels, while pork prices are about 10% higher than five-year average levels, a further reduction in pork consumption could be expected.

Total exports are also down for Jan-Apr 2017, by 2.8%, YOY. Exports to China and Hong Kong are down markedly, by 15% YOY, which have been offset by increased exports to Japan, South Korea, and the US.

Brazil

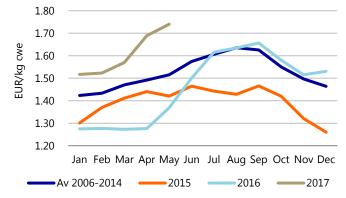
After having increased by one-third last year, Brazilian pork exports declined by 4% YOY during the first five months of 2017, totalling around 272,500 tonnes. During this period, Chinese pork imports from Brazil declined by around 22%. On the other hand, Russia, the largest destination for Brazilian pork exports, increased imports by 10% in the same period, by volume (see Figure 10).

Brazilian pork exports saw sharp declines in April and May, after the announcement of the Brazilian federal police investigation into irregularities in meat inspections in the country in mid-March. Additionally, while this was still being managed by the meat industry, a new shockwave arrived in the meat sector in May 2017, with allegations of corruption involving a number of politicians and the largest Brazilian meatpacker.

It is still premature to judge the mid-term impacts of these scandals on consumer perception worldwide, and the possible knock-on consequences for Brazilian meat exports and local consumption. Nevertheless, preliminary numbers have shown that pork exports recovered during June 2017, reaching volumes close to those registered in June 2016.

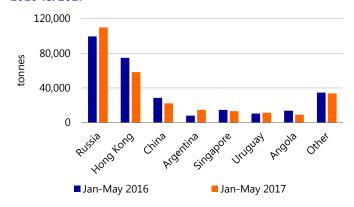
After increasing by 8% in 2016, Brazilian pork production has stabilised in 2017, increasing only by 1% during Q1 2017. In May 2017, domestic pork prices were 23% higher than in May 2016. Meanwhile, indicative feed prices in May 2017 were 41% below May 2016. Going forward, corn prices are expected to remain at low levels during 2H 2017, as a record winter crop is underway. Therefore, even considering the existing challenges, the Brazilian pork industry appears on course to deliver positive results during 2017.

Figure 9: EU monthly hog prices, 2006-2017



Source: European Commission, Rabobank 2017S

Figure 10: Brazilian pork exports by destination, 2016 vs. 2017



Source: Associação Brasileira de Proteína Animal, Rabobank 2017

Canada

Pork supplies in Canada continue to pace ahead, increasing by 2.5% YTD, albeit with an almost equal mix between increased hog numbers and weights. This is quite different to the situation in the US, where hog weights continue to decline and offset some of the growth in hog numbers. Canada had a strong 2016, which is helping to drive increased pork supplies, especially as exports continue to climb. Profitability for Canadian hog producers continues to be strong, with margins averaging USD 40/head vs. USD 27/head in the same period of 2016 (see Figure 11).

While some had feared 2017 would see a fall from 2016 levels, Canada's pork exports through April were up by 3%, after climbing 6.5% in 2016. This rate of growth was primarily driven by increased exports to China, which are up over 20% so far in 2017. Canada has gone from exporting 30,000 tonnes to 35,000 tonnes of pork to China per quarter in 2013 and 2014 to nearly 90,000 tonnes per quarter today. This has not only helped to offset the loss of Russia as an export destination a few years ago; it is also a welcome source of industry growth.

Mexico

As the summer begins, hog prices have started to rise (*see Figure 12*). Two main factors are pushing prices higher in Mexico. First, hog prices tend to have their strongest correlation with US hog prices during summer. Second, as a consequence of PEDv, we continue to see lower supply of hogs in the market, adding upward pressure on hog prices. While this year, PEDv has had a lower impact than previous years, we expect hog prices to be supported for the rest of the summer and start decreasing in September.

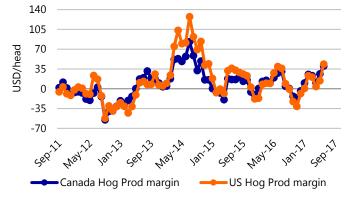
We anticipate lower production for 2017 as a whole, mainly due to a reduced hog supply. We have adjusted our forecast down from the previous level of 1.43m tonnes (CWE) to 1.42m tonnes (CWE).

Mexico's appetite for pork remains strong, as we continue to see record levels of monthly pork imports. Despite the exchange rate being well above year-ago levels, imports remain strong and higher than previous years. Pork imports are 28% higher than the previous year, January to April.

Imports remain an important source of raw material for pork processors, for hams, and other products. We expect imports to increase to 1.1m tonnes (CWE). As NAFTA negotiations are expected to start in August 2017, imports during 2H 2017 will likely continue at the same pace seen in 1H, as uncertainties around the future of NAFTA maintain trader interest. This is despite the secretaries of agriculture in Mexico, the US, and Canada agreeing that NAFTA has been good for agriculture and animal protein trade.

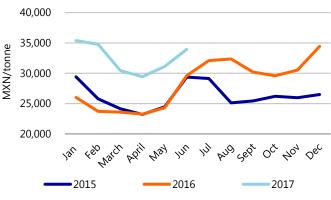
Pork meat prices are being pushed upwards due to higher hog prices and input costs increasing, mainly due to inflation caused by the Mexican peso depreciation. We expect prices to remain well supported through Q3. In June, pork meat prices were up by about 9%, compared to last month, and by 15% over year-ago levels.

Figure 11: Canadian and US hog production margins, 2011-Jun 2017



Source: Statistics Canada, Rabobank 2017

Figure 12: Mexican hog prices, 2015-2017



Source: FND, Rabobank 2017

Japan

After Japan's pork sector expanded by 2% in 2016, supply growth has moderated in 2017—and in fact, we expect production to decline slightly during the year. Not only did production increase in 2016, so did imports—to the tune of 7%—driving a 2.5% increase in domestic supply. This trend drove a rather significant decline in prices in the back-half of 2016, but luckily prices have moderated this spring (see Figure 13). Wholesale pork prices have climbed by 18% so far this year in Japan, and they are largely in line with prices this time last year.

The weaker yen vs. the US dollar has helped to boost the prices of imports and support local pork producers. With the yen about 10% weaker than this time last year, this will help curb the rate of import growth seen in 2016. Many major pork suppliers to Japan are working to improve trade access, and the recent announcement of the EU-Japan Economic Partnership Agreement and the agreed tariff reductions will provide a strong advantage to European exporters, once implemented. Other exporters are also seeking to agree bilateral trade arrangements with Japan after the failure of the TPP, including Canada. If these agreements can come to pass, it will surely shuffle the pork-trade deck chairs between the EU, Canada, the US, and Mexico, all of who consider Japan an important pork trade destination.

South Korea

South Korea has been a very strong market for pork so far in 2017, with strong prices, increased imports, and increased exports (see Figure 14). Disease outbreaks, including footand-mouth disease in the cattle sector and avian influenza on the poultry side, have benefited pork, both with consumers and in imports. Pork production is expected to increase by 2% in 2017, which is down from 4% in 2016, but imports are also on the rise. Through April, South Korea's imports of pork from the US were up almost one-third vs. 2016.

We expect the disease outbreaks that have recently impacted the beef and poultry sectors to continue to benefit South Korea's pork market. With pork accounting for about half of all animal protein consumed in South Korea, the struggles of beef and poultry frequently result in benefits to pork—and this has certainly been the case in 2017.

Figure 13: Japanese pork prices wholesale market Tokyo, 2007-2017

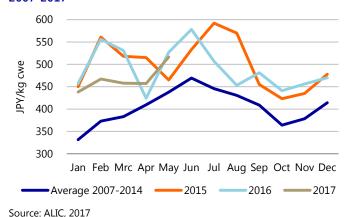
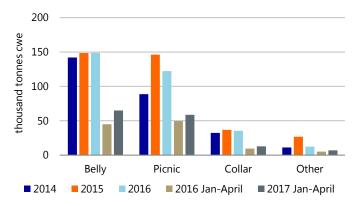


Figure 14: South Korean pork imports by cut, 2014-2017



Source: Korean Meat Trade Association, 2017

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