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African Swine Fever Losses to Complicate the Global Dairy Complex

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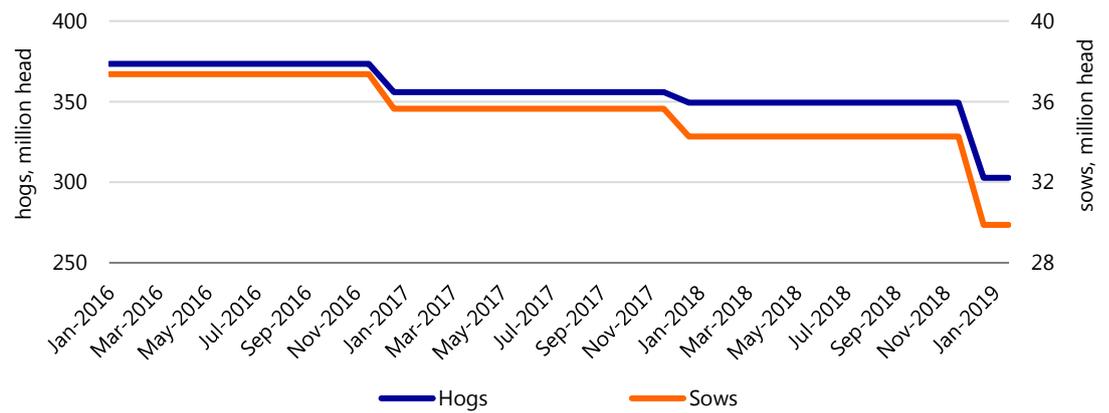
Introduction

The unprecedented contraction in supply of pork from China will have a spill-over impact on the dairy sector. China is the world's largest pork producer and accounts for around 50% of pork production globally. The current African swine fever (ASF) epidemic is expected to reduce China's pork production by 25%-35%, resulting in increased demand for other animal proteins but lower demand for feedstuffs. Herd recovery could take years, due to the perceived risk of recontamination by hog producers before effective solutions are in place. Rising demand for beef could constrain China's milk production if dairy cow culling accelerates to fill some of the gap in animal protein demand. Simultaneously, fewer hogs translate into lower demand for feed, which has negative price implications for key dairy ingredients: milk permeate, whey permeate, whey powder, and lactose, all used in swine feed. While lower Chinese milk production would normally have a positive effect on longer-term global milk prices, the larger downward pricing pressure on the whey complex is expected to have a more immediate impact on farm-level milk prices in key exporting countries.

China's ASF Leading to Animal Protein Substitution

China is home to the world's largest swine population, accounting for about 50% of global supply and global pork consumption. Rabobank's Animal Protein team forecasts a 30% loss in Chinese pork production, an estimated 150m-200m pigs, in 2019 due to ASF. This is nearly 30% larger than annual US pork production and is equivalent to Europe's annual pork supply. The magnitude of these Chinese pork losses mean they cannot easily be replaced by other proteins. The substitution effect between pork and other meats could lead to rising beef prices in China, which has a chronic shortage of beef. Beef prices have been well-supported during the last few years, and Chinese consumers view beef as a better animal protein than pork. If this continues, accelerated dairy cow culling could further restrain China's milk production growth, lifting China's non-animal feed dairy import requirements.

Figure 1: Falling average annual herd size in China due to ASF, 2016-2019



Source: Ministry of Agriculture, Rabobank 2019

China's Demand for Dairy-Derived Animal Feed Falling

China's hog industry is a large consumer of dairy-derived animal feed. Prior to the ASF outbreak, China slaughtered nearly 700m pigs annually that on average consume 400g or 0.8 lb of lactose over their lifetime, or an estimated 250,000 metric tons of lactose. Lactose is a key feed ingredient in the post-weaning piglet diet. Lactose is an ingredient and a component of dry whey, which consists of nearly 70% lactose, while whey permeate and milk permeate contain about 80% lactose. All of these lactose-containing feedstuffs are used in piglet nutrition.

Between 2016 and 2018, China imported, on average, about 530,000 metric tons of whey and permeate and 84,000 metric tons of lactose annually for feed and food purposes. Rabobank estimates that over 50% (up to 60%) of the whey, permeate, and lactose imports were used in animal feed. With a much lower herd size expected in 2019, China's demand for feed grade whey, permeate and lactose will also shrink. The expected 150m-200m reduction in pigs represents an estimated 54,500 metric ton to 72,500 metric ton decrease in lactose or lactose-equivalent demand in piglet feed. The first signs of lower YOY Chinese whey and permeate imports in 2H 2018 appeared in November 2018, and the decline expanded to 27% YOY in March 2019, according to global trade data. China's whey and whey permeate imports from the US were hit particularly hard, falling 60% compared to the prior year.

A Double Whammy for US Exporters to China

Before China imposed an additional 25% tariff (which included most dairy exports) in July 2018, as a result of the ongoing trade war, the US accounted for over 55% of China's whey and permeate imports and 75% of its lactose imports, according to global trade data. Since July 2018, the US lost market share primarily to the EU, which posted a nearly 20% gain in exports during 2H 2018, as well as other regions (Belarus and Argentina). Nevertheless, the US remained a key supplier in 2018 due to contractual commitments and the vast size of the Chinese market. This will not be the case in 2019.

The ASF situation in China has had a double impact on US whey, permeate, and lactose exporters, as the world's largest market for dairy-derived animal feed shrinks and US competitiveness erodes due to the trade war-induced tariff. China's imports of dry whey and permeate contracted by 16% in Q1 2019 to 115,323 metric tons, and its imports of lactose retreated by 5% to 21,379 metric tons during the same period. Despite the declining market size, EU28 exports of dry whey and permeate increased 5% YOY to 50,576 metric tons, capturing a 44% market share. Meanwhile, US whey and permeate exports declined by YOY 53% to 35,219 metric tons, representing a 25% drop in market share. Likewise, during the same period, China's imports of US lactose retreated by 24% to 14,341 metric tons as imports from the EU-28 rose to 6,239 metric tons, or 81% above last year's level. Without a resolution in the ongoing trade war, the US is expected to continue to lose market share in the declining Chinese market for dairy-derived animal feeds unless significant price concessions are made.

International whey powder prices have declined by 15%-20% since January and lactose prices have retreated by nearly 10%. But permeate prices have felt the brunt of the fall in demand from Chinese buyers, with prices dropping by 50% since February, according to industry contacts. Publicly-available European and US dry whey prices illustrate price weakness and convergence since early 2019 (see Figure 3).

Figure 2: Chinese sources of dry whey and permeate in 2018



Source: GTIS, 2019

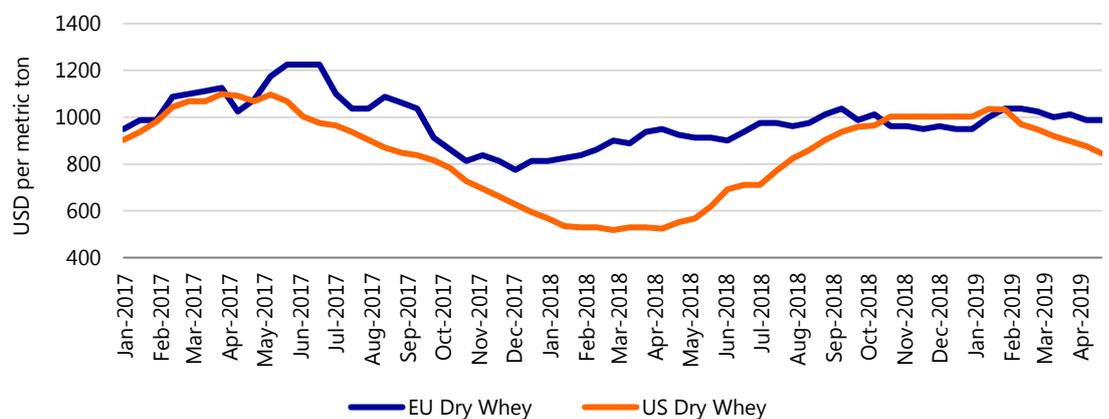
Negative Pricing Implications to Loom

Directly impacted by ASF, declining Chinese dry whey, permeate, and lactose are contributing to lower global dry whey prices .

This may only be the start of weaker dry whey and lactose prices. CME dry whey futures prices have moved marginally lower from above USD 850/metric ton or USD 0.38/lb, an indication that perhaps the futures market has yet to absorb the gravity of the situation. Yet, USDA spot prices for dry whey and lactose used in animal feed are trading below USD 550/metric ton or USD 0.25/lb.

Rabobank's view is that the impacts from ASF are not short-lived and that it may take years to replenish the hog numbers that have been lost. Thus the demand for dry whey, permeate, and lactose will be negatively impacted, lowering the potential returns to cheese and whey manufacturers through this period. Pricing dynamics across the whey complex will be a key watch for many dairy manufacturers over the coming period. The run-down of EU intervention skim milk powder (SMP) stocks has somewhat released the handbrake on SMP pricing and protein values more broadly. After a multi-year period of lower returns from producing SMP and butter versus other commodities, the indicative return from this stream is now comparable with other main streams. If a period of weaker whey, permeate, and lactose pricing develops across the complex, this would reduce the processing returns from cheese and whey. Further downward pricing pressure is anticipated as a result of significantly weakened demand from the Chinese swine sector, forcing manufacturers to find new outlets for their products in food-grade applications, other animal feed sectors, and new export destinations. It is also important to note that lactose and dry whey prices contribute to farm-level milk prices in parts of Europe and the US. For example, one cent change in the US dry whey price results in a six-cent move in the class III milk price, which may cast a shadow on the milk price outlook.

Figure 3: EU and US whey prices falling but at different magnitudes



Source: USDA 2019

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