# African Swine Fever in China: An Update

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**LAST NOVEMBER,** we wrote an article (Shao et al. 2018) documenting the development of African Swine Fever (ASF) in China and its impacts on regional hog and pork prices. Since then, ASF has continued to ravage China's hog industry with 62 new cases from November 1, 2018 to March 27, 2019, resulting in a total of 114 cases. The total inventory of hog factories with ASF outbreaks has increased from 61,214 to 319,726 *(click here to see an animated map of ASF cases in China).* The pace of the outbreaks has somewhat slowed down from more than 20 cases per month in November and December last year to less than 10 cases per month this year. It is possible that the number of cases is greater than that reported, in part because provinces and producers do not have the economic incentive to report. In this article, we update the impacts of ASF on China's hog inventory, pork imports, and future soybean imports.

On January 24, China's government published an updated ASF emergency response protocol (MOA 2019) that shortened the post-outbreak period a facility must wait before resuming production—a sign that government is actively attempting to limit the impacts of outbreaks. However, new cases continue to pop up in scattered locations and in large facilities, suggesting that an effective method to contain the disease is still elusive.

According to official reports, the number of culled pigs is modest—916,000 as of January (Chen 2019)—but recent inventory statistics show a much larger impact. In December, January, and February, hog inventory dropped by 3.7 percent, 5.7 percent, and 5.4 percent respectively, a total of 14.1 percent, or 45 million pigs (see Figure 1). During these three months, sow inventory, which determines production capacity in the next year, also decreased by 13

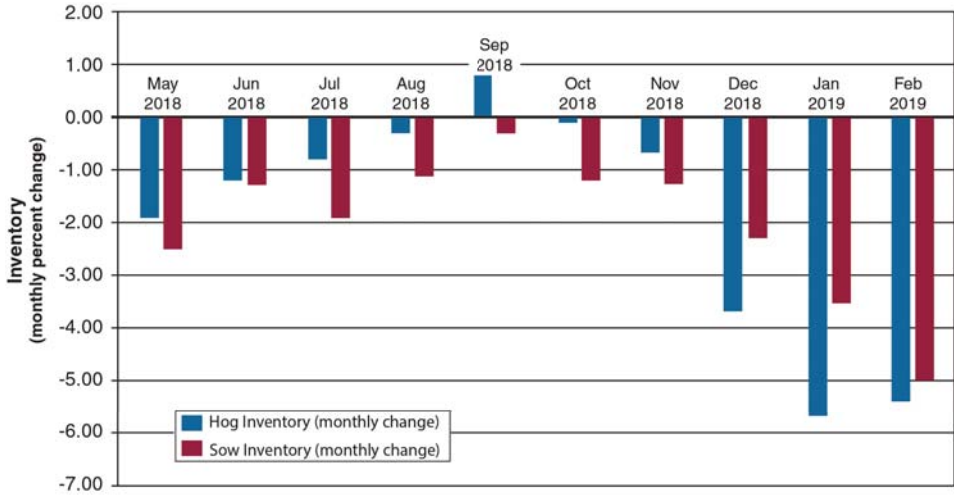


**Figure 1. Monthly changes in China's hog inventory**
*Source:* Ministry of Agriculture of China

in cattle procurement might be about optimal for cattle markets today. Of course, markets can change: new trade deals or the need for more stringent labeling, for example, might make contracting more important. Barring dramatic changes to demand, cattle might be at a point on the production function that makes movements to specialization less fruitful and, therefore, creates less need to control throughput into the processing facilities. Specialization may have reached its limit.

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percent, or 4 million sows. As part of its efforts to control the disease, the Chinese government outlawed the feeding of household waste to pigs. It seems likely that the farms relying on this form of feeding are the farms reducing their inventory.

After the ASF outbreak began, the Chinese government restricted cross-province hog and pork transportation (see Shao et al. 2018 for details), which resulted in regional hog and pork imbalance and price divergence (see Figure 2). Arguably, these policies have caused more turmoil than the disease itself. In December 2019, realizing the detrimental effects of complete cross-province transportation ban, the government allowed "point-to-point" live hog transportation from hog farms to slaughterhouses in other provinces (MOA 2018a). The rules for which farms and slaughterhouses qualify for point-to-point transportation favor large producers, which could accelerate the upscaling of China's hog industry. As a result of this relaxation of transportation restrictions and the slowing down of the disease, regional prices substantially converged by February 2019, as seen in Figure 2 (for more detailed graphs see Inouye 2019). China's hog market in the near future will be driven by the overall inventory decline instead of regional imbalance.

The damage of ASF has already significantly influenced China's pork imports. After the initial tariff increase on US pork in April 2018 (Li 2018), pork exports to China reduced to a trickle. In December 2018, US exports to China started to pick up with 7,823 metric tons of pork exported by the first week of January 2019. After several weeks of zero exports, trade resumed with 17,215 metric tons exported in the second week of February 2019. The net sales of 23,846 metric tons in the first week of March was the third-largest weekly sale since USDA started publishing weekly country-specific export data. As of the writing of this article, the total commitment (total export+outstanding sales) of pork export to China is at 142,845 metric tons, almost five times the total export to China last year (Figure 3). Given the high tariffs, the Chinese government is likely behind these purchases, either by directly ordering state-owned firms to buy or by waiving tariffs. In this regard, we note that COFCO, a state-owned enterprise, did not pay a duty on imported soybeans destined for the state reserve.

In recent media reports, it has been suggested that China will purchase 300,000 tons of US pork this year (Mayeda 2019). This may explain the rapid increase in CME lean hog futures contracts. The sustainability

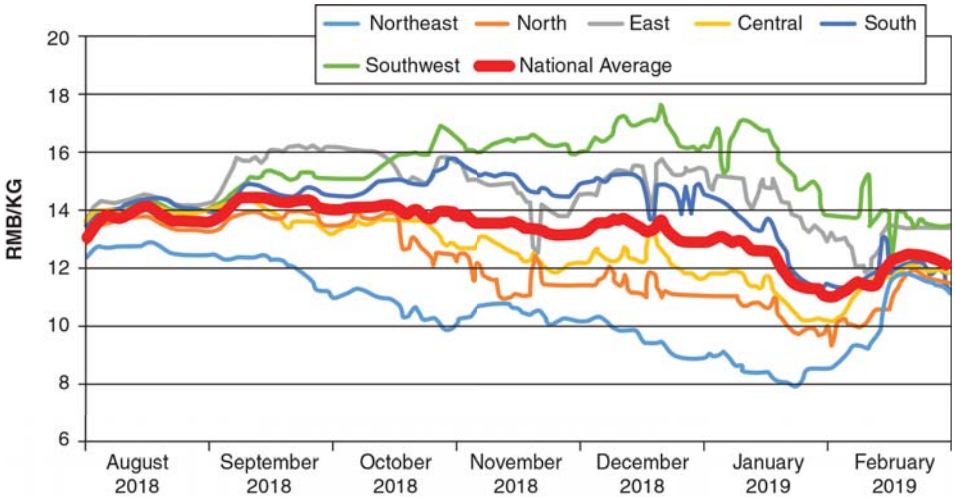


**Figure 2. Live hog prices by region**

*Source:* Zhue.com.cn, adopted from Inouye (2019)

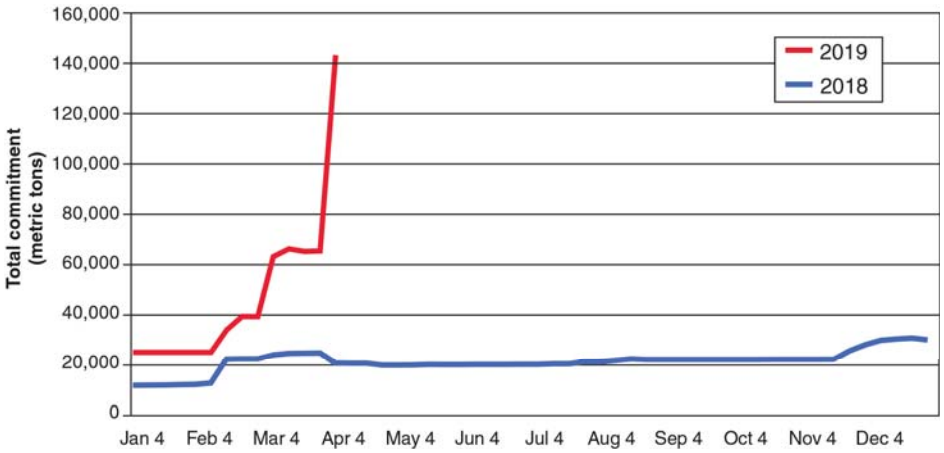


**Figure 3. Cumulative pork export from the United States to China**

of strong export performance to China will depend on the outcome of the ongoing trade talk as well as export competition from the European Union (EU), which accounted for 76 percent of pork exports to China in 2018. However, the EU's hope of exporting more pork to China this year is clouded by the discovery of ASF in member countries including Belgium, Poland, Latvia, Hungary, and Romania, among others.

While ASF brings opportunities for pork exporters, it is bad news for soybean exporters. According to our estimation, a 14 percent decrease in pork production would lead to a 10 percent decrease in soybean import demand.[1] In addition to the negative impact caused by ASF, the recent change in China's feed protein standard may also decrease soybean demand. On October 26, 2018, anticipating potential difficulty in soybean imports due to the trade war, the China Feed Industry Association published a new feed standard (MOA 2018b) with lower minimum protein requirements for hog feed. Official sources in China have estimated that this policy change could result in an 11-million-ton reduction in soybean meal demand and a 14-million-ton (16 percent) reduction in soybean import demand (MOA 2018b). ASF and the change in feed standard together would result in a 24 percent reduction in soybean import demand.

In summary, the ASF outbreak in China has caused impacts larger than what the official number of culled pigs would imply. China's hog inventory has decreased by 14 percent while sow inventory has decreased by 13 percent. While in the earlier months of ASF the Chinese market was driven by regional imbalance, it is now driven by the sharp reduction in overall herd size. The perspective of shortage and high prices has driven China to import large amounts of pork from the United States despite the tariff. We expect that high imports are likely to continue, especially if trade talks progress smoothly. At the same time, ASF and the reduced feed protein standard may reduce soybean export to China by 24 percent, other things being equal.

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[1]China produced 54.15 million tons of pork in 2018 (PS&D database, accessed in March 2019). Using a feed-pork ratio of 4.5, this level of pork production would require 243.675 million tons of feed. In China, about 20 percent, or 48.735 million tons, of feed is comprised of soybean meal. Since the soybean to soybean meal ratio is about 78 percent in China, producing 48.735 million tons of soybean meal would require 62.48 million tons of soybean. A 14 percent reduction in soybean demand for hog feed translates to an 8.75 million ton reduction in soybean demand. If all that reduction is applied to import demand (88 million tons in 2018), there would be a 10 percent reduction in import demand.