

Strategic Analysis Paper

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African Swine Fever in China: Turmoil Ahead for Food Prices and the Chinese Economy

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Key Points

- China is experiencing an outbreak of African Swine Fever (ASF), which is devastating its pig farms.
- The Chinese response to the crisis has not been well managed. Quarantine efforts have failed and a culture of secrecy around reporting outbreaks has made the epidemic harder to control.
- China is the world's biggest producer and consumer of pork and pig stocks have plummeted.
- As a result of the ASF epidemic in China, global protein prices are set to increase significantly, while grain prices are likely to plummet due to reduced demand from Chinese farmers. The Chinese economy will face difficulties as meat prices increase.

Summary

African Swine Fever (ASF) has broken out in China, in what has been described as [one of the biggest](#) animal disease outbreaks ever seen. The disease is highly contagious, easily spread (although it is not transmissible to humans), incurable and almost always fatal. There is no vaccine available. As a result, the disease has spread to every province in China and has continued to spread through Asia, threatening pork production in a region where pork is often a staple protein. The Chinese Government has not responded to the crisis in an especially effective manner. Efforts to contain the disease have failed and, in some cases, have helped it to spread further, while measures to prevent panic have suppressed

information about where outbreaks are occurring, making it difficult to prevent its spread. As long as that continues, eradicating ASF will be very difficult. As a result of the outbreak, food prices are set to fluctuate globally, with protein prices rising and grain prices falling. Meanwhile, high protein prices will put pressure on the Chinese economy.

Analysis

African Swine Fever: Context

[African Swine Fever](#) is a highly contagious, largely fatal disease, affecting both domestic and wild pig populations. The ASF virus is easily spread, through contaminated pork products or through the movement of infected pigs. In Africa, where the disease originates, [the virus exists in ticks](#), which act as a reservoir for the virus. The disease is resistant to chemicals and physical interventions and can survive for long periods of time in infected faeces, blood and tissue, making it easy to spread – [ASF can survive](#) in cool conditions with no light for up to six years, or up to 104 days in frozen or chilled meat. In countries which do not contain the host tick species, transmission is most often through [infected blood](#). The disease usually appears in its acute form (less deadly sub-acute and chronic forms also exist), which presents as a haemorrhagic fever. This can cause mortality of [up to 100 per cent](#) in previously unexposed pig populations. Currently, no vaccine or treatment is available to combat ASF.

The virus was first described in [Kenya in the 1900s](#), but the current epidemic has its roots in a 2007 ASF outbreak in Georgia, probably from the [improper disposal of infected meat](#) from a ship in the Black Sea. The virus then spread through the Caucasus and into Russia, becoming endemic. By 2014, the disease had reached the European Union, surfacing in Lithuania, Poland and Latvia. In 2017 and 2018, European cases came to include Belgium, Bulgaria, the Czech Republic, Hungary, Moldova and Romania. By 2018, the virus had also spread to China for the first time, in Liaoning, a province in the north-east, from where it has since spread to [almost every Chinese province](#), as well as several other Asian countries.

Although ticks and wild boar populations have previously been the main vectors for transmitting ASF, their ability to spread the virus is [generally slow](#) and limited to local areas. After suddenly appearing in China, [thousands of kilometres](#) from Europe and the parts of Russia experiencing epidemics, the role of humans in distributing the ASF virus has become particularly important. International trade creates a number of different ways for diseases such as ASF to spread, [particularly through](#) live animal trade and the trade of meat and meat products. Formal international trade can create barriers for the spread of disease, particularly in the face of a known biological threat such as ASF, by restricting trade from regions known to have outbreaks of disease and border controls (although that becomes more complicated when free-trade areas are involved).

Informal international trade is more difficult to regulate, especially when restrictions on certain animal products are in place (restrictions on formal trade can [increase the demand](#) for informal trade). The illegal importation of meat is the most common way in which pig diseases (including ASF) are introduced to a given country. In the past, the spread of ASF from one region to another has been strongly linked to ports and airports, where improperly disposed pork products from commercial flights and voyages have been sold as swill or

foraged by wild pigs. That was [likely to have been the case](#) when ASF first spread from Africa to Europe in 1957 and was probably the source of the current epidemic, when it began in 2007. Although it is currently unknown [exactly how](#) ASF was transmitted into China, illegal pork imports have become a major cause for concern in other countries. Japan, Taiwan, Australia, South Korea and the United States [have all intercepted](#) infected pork products or mislabelled Chinese pork, raising fears that ASF will continue to spread to uninfected countries.

The Chinese Pork Industry

China is the [single biggest](#) pork producer and consumer in the world. The country is responsible for 47 per cent of the world's pork production and consumes 49 per cent of the world's pork, [which is around](#) twice the amount of pork produced in the European Union and five times the amount produced in the US. China's high pork consumption is partly cultural but has [also been facilitated](#) by efforts by the Chinese Government to "modernise" diets, through higher protein intake. China also relies on massive soybean exports from North and South America. China imports 66 per cent of the soy traded globally, most of which is used to feed pigs.

The structure of Chinese pig production has partially contributed to the spread of the ASF virus. While the number of pig farms in China is decreasing, small farms account for over [90 per cent](#) of all Chinese pig farms (although only 29 per cent of national production). Often, smallholder [farmers do not report](#) ASF outbreaks among their pigs. Rather than suffer the economic consequences of a lost herd, many farmers sell pigs that do not present symptoms (a practice known as "emergency sale"), while pigs showing obvious signs of infection are slaughtered.

Not only is the illegal sale and movement of pigs and pork products especially prevalent among smallholders, but small-scale farms are also more likely to use swill to feed pigs, which may itself be contaminated with the ASF virus. That has been the case in China, where a compensation scheme designed to help affected farmers was [inadequately implemented](#). While the Chinese Government ordered that 1,200 yuan (\$251) be paid per head of lost livestock to farmers, local governments failed to enact the scheme. It created an incentive for farmers to sell their herds as soon as one pig fell ill, rather than report outbreaks, thereby helping the virus to spread further.

African Swine Fever: China's Response

To its credit, the Chinese Government [did react quickly](#) when ASF was first detected in the country, putting in place [several measures](#) to halt the spread of the disease. Along with the ultimately ineffective compensation scheme, quarantine areas were set up in affected regions. All pigs within those areas were reportedly culled and pork products were forbidden from entering or leaving quarantine zones. Additionally, bans were put on the transportation of live pigs and pork outside of ASF contaminated provinces, and swill feeding was banned across the country. Slaughterhouses in ASF-affected provinces were also closed.

Although the Chinese Government has made efforts to address the crisis, those efforts [have been inadequate](#) and, in some cases, have worsened the situation. Quarantine efforts have failed to contain the virus, with infections rising in the south-central provinces upon which the Chinese national response has been modelled. That is partly due to [how easily](#) the disease spreads, especially in the absence of strict sanitation measures. [Only 14.4% of outbreaks](#) in China were attributable to the movement of pigs and pork products, compared to 44.1% that were caused by the movement of contaminated vehicles and personnel. Swill feeding was responsible for the remainder.

China's political system has also made it difficult to effectively address the spread of ASF; a lack of government transparency has made it difficult for a proper response to the spread of ASF to occur. The SARS epidemic saw [political interests take precedence](#) over public health and, while attempts have been made at reform since the chaos of SARS, political interests again threaten to stifle attempts to control the current ASF outbreak. Social stability has long been the focus of the Chinese Communist Party and the popularity of pork as a staple food means that it plays a key role in China's inflation rates. As a result, post-SARS reforms designed to increase transparency during natural disasters appear to have lapsed, which is problematic, because identifying outbreaks [is critical](#) to stopping the spread of the disease.

Officially speaking, the epidemic has slowed almost to a halt. Of 113 reported cases reported [by the end of March](#), only two had occurred in March, seven in February and five in January – down from 21 and 25 cases in December and November, respectively. There are suspicions, however, that the number of culled pigs is much higher than the [one million](#) officially reported. Similarly, official statistics show that [pig stocks have fallen](#) by 20 per cent, but independent analysis suggests that the figure may be closer to 40 per cent. In some cases, reports have emerged that individuals [have been punished](#) for reporting outbreaks. [Other reports indicate](#) that journalists have been banned from reporting on ASF or have been given orders on how to cover the outbreak.

Given China's less than effective response to the presence of the disease, it seems unlikely that it will be able to eradicate ASF in the near-term. Even if Beijing fully acknowledged the seriousness of its ASF problem and took more comprehensive steps to eradicate it, it will be years before China will be able to rid itself of the disease. [In Spain](#), strict sanitary measures, industrialised pig production and help from the EU all helped the country to eradicate ASF – after 35 years. The virus has also spread to [several of China's neighbours](#), including North Korea and Vietnam, meaning that even if China manages to wipe out ASF in its own borders, the possibility of re-introduction will remain.

Future Trends

The ASF outbreak has already started to create problems for China and the rest of the world. The huge loss of pig stocks has already started to [push up pork prices](#). So far, the increase has been fairly modest, with wholesale Chinese pork prices only around [eight per cent](#) higher than in August. Modest price inflation is largely due to emergency slaughter, undertaken by panicked farmers after ASF broke out, which mitigated some of the price increase. Once that effect wears off, price inflation is expected to continue to rise. According to China's Ministry of Agriculture and Rural Affairs, the price of pork may [increase by 70 per](#)

[cent](#) by the end of the year, which is thought to be a conservative estimate. As pork is such a staple food, that poses a particular problem for China. A sudden increase in pork prices may push the Consumer Price Index up by more than [three per cent](#) in some months over the next year. As Beijing has the objective of keeping consumer inflation to a level of [three per cent or lower](#), it may make it difficult for China to introduce monetary easing if the economy falters later this year.

A sudden shift in pork prices will also have consequences for other protein markets. As pork prices increase, Chinese pork consumption will fall and the [consumption of other protein sources](#) such as poultry, seafood and beef will increase. Prices of beef, sheep and chicken meat [have already increased by](#) six, 11 and eight per cent, respectively, while the price of chicken breast meat has increased by 44 per cent. Shifts in Chinese protein consumption are set to increase [protein prices globally](#), while grain prices are expected to fall as less will be needed for pig feed.

Ultimately, the Chinese economy and global food prices are expected to experience bouts of heightened volatility until China succeeds in bringing the outbreak of the ASF virus under control.

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