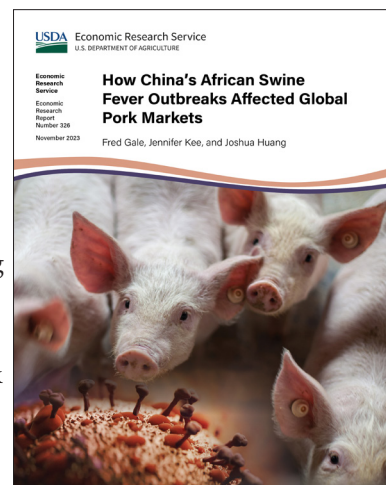


How China's African Swine Fever Outbreaks Affected Global Pork Markets

Fred Gale, Jennifer Kee, and Joshua Huang

What Is the Issue?

Animal disease outbreaks can cause unexpected changes in supply and demand for meat and other livestock products. These changes can result in price fluctuations and disruptions in foreign trade that create uncertainty in international markets. Diseases that spread across national boundaries and result in the culling of large numbers of animals in major producing countries are especially disruptive. This is what happened when African swine fever (ASF) spread from Europe to China in 2018—one of the largest animal disease incidents ever. The outbreak reduced China's pork supply, and Chinese pork prices more than doubled to reach record levels. As China accounts for nearly half of the pork produced and consumed in the world, this report investigates the degree to which China's reduced pork supply affected pork-exporting countries.



What Did the Study Find?

- The ASF virus moved from Europe to China in August 2018, then spread rapidly throughout the country. The virus impacted China's pork supply more than indicated by the number of officially reported outbreaks.
- Following China's first ASF cases, its swine herd went through a 30-month cycle of decline and recovery from the third quarter of 2018 (Q3) to 2021 (Q1).
- China lost an estimated 27.9 million metric tons of its pork production during the 30-month cycle. China imported a record volume of pork during those months, but the imports replaced only one-fifth of lost production. Thus, China experienced shortfalls in pork supplies for about 18 months, concentrated during the second half of 2019 and most of 2020.
- Increases in pork prices lagged the spread of the disease. Pork prices in China more than doubled, with most of the increase occurring about a year after the initial outbreaks. Pork prices remained at a high level for 14 months and then fell rapidly during 2021. Pork prices returned to near their pre-ASF level about 38 months after the first outbreaks.
- Pork exports to China surged during 2019–20. China accounted for 45 percent of world pork imports in 2020.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

- A total of 31 countries exported pork to China, but the European Union accounted for 58 percent of the exports. The United States was the second-leading pork exporter to China, with a 15 percent share, despite trade tensions that coincided with China's ASF outbreaks.
- During the 14-month peak in China's import demand, the share of pork exported to China increased for top pork-exporting countries. Sales of higher value cuts grew fastest.
- Impacts on pork markets outside of China were relatively modest. For example, increases in pork prices in three leading pork exporting countries (the United States, Germany, and Spain) were relatively brief and much smaller in magnitude than price increases in China.
- Volatility in China's pork market is an ongoing source of uncertainty for exporters despite the rebound in China's production.

How Was the Study Conducted?

The study analyzes officially reported ASF outbreaks in China using data from China's Ministry of Agriculture and Rural Affairs and United Nation's World Organization for Animal Health. The report authors analyzed officially reported outbreaks to track the temporal and geographic spread of the disease. The study consulted national supply statistics, price data, official announcements, scientific articles, and private industry reports to provide a comprehensive assessment of the economic impacts of African swine fever in China. The study also gauges the impacts on pork-exporting countries using Chinese customs data.